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BUILDER'S GUIDE TO

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Sales and Accounts Receivables

Why Keep Records?

Accounting Methods

Cash and Charge Sales

Managing Receivables

Bad Debt Procedures

Sales Records and Cash Budgeting

Sales Planning

Planning for Profits

Why Keep Records?

This reference is for builders, contractors, subcontractors, and anyone in specialty trades. It's geared to the problems builders have in maintaining a good set of useful books. Company sizes range from one-man operations all the way up to some of the world's largest corporations. The smaller the business, the more it needs economical record keeping.

A business operating out of a small office on a tight budget often can't afford full-time bookkeeping and accounting services. Since the bidding is so competitive, the small operation with the lowest possible overhead will be most likely to bid in line with larger companies, win contracts, and make a profit. Just like an outfit that wastes material and manhours, the operation that depends too much on expensive professional services can't compete with an efficient shop.

I'll provide step-by-step suggestions for keeping books and records, and won't burden you with unnecessary terminology. I'll explain the examples in detail and use illustrations to show how to simplify the process of maintaining a good set of books. This book isn't for accountants. It's meant to help the owner or manager of a construction company save money and time by getting involved in much of his or her own record keeping.

You can use the information immediately. Without revamping your books all at once, you should be able to streamline gradually and still have all the information that you and your accountant need. And you can adapt these suggestions to the needs of your operation. Every business is different, and no one method will work for everyone.

In the beginning, you'll probably need to spend some time developing the ability to use your financial information to your own benefit. But in time, you'll only need a few hours each week. You'll be a better-rounded businessperson when you're involved in the development of your own financial information.

You don't need an accounting background to keep your own in-house books. You do need the desire to be involved, to increase your understanding, and to cut your overhead. When you can look at a financial report and use the information in it effectively, you'll have added a new dimension to

your management skills. Then you can comfortably leave preparing the financial statements and tax returns to your accountant — your financial subcontractor.

Now let's answer the question posed by the chapter title: Why Keep Records?

Builders have to keep books just like other business owners. But yours must be especially complete and efficient. Today's construction contractor is operating in a complex industry, and a good set of records is as necessary as any modern piece of equipment.

You know that when you estimate the cost of a job, a major part of your bid is for labor. Imagine how few contracts you'd win if your labor was twice as expensive as everyone else's. The same holds true for a bookkeeping method. The less time you have to spend, or pay someone else to spend, the less it will cost you to keep your books. Reducing your cost (while achieving maximum efficiency) is the goal of a well-designed bookkeeping system. If you can reach that goal and still have the numbers you need, you'll have a good set of books. And you'll definitely save time and money.

The Records You Need

The law requires that you keep financial records. As a result, many builders think of their bookkeeping as a necessary evil, and nothing more. But if you can make good use of the financial information in your books, you'll be a more informed manager. The more insight you develop, the more effective you'll become. That's why people maintained complete business records in the United States long before the income tax even existed.

A set of books should tell you everything you need to know in the least complicated way possible. The fewer papers you have to push, the better. A method should contain just the right amount of information — no more and no less than you really need. This guideline is one often forgotten by business people — accountants included.

A method that gives you too little information isn't going to save you time. Sooner or later, you'll have to go back and fill in the gaps. Imagine working from a blueprint only half completed or a set of specs with missing pages. If you don't have it all, you're wasting your time.

On the other hand, a method with unneeded features will be time-consuming and expensive. Whether you do the work yourself or pay someone else, it's costing you. A good method doesn't have any fat. The following is an overview of a good accounting system for builders. Each component will be discussed in detail later in this guide.

Sales

The sales journal is a detailed record of all your income from operations. You need this detail for financial statements. It also provides a good way for you to see how you're doing compared to last year, last month, or last week.

The comparison of income to past performance is very important to you in planning. No matter what direction your business takes, you should have an idea of your probable cash flow — how much cash will be coming in, and when. You can't make informed plans unless you know your future income potential.

Keeping track of sales also gives you the information you need to back up what you report for sales tax (if your state levies a sales tax). Sales records are also needed for some insurance reports, Census Bureau reports, and other forms you have to provide to various governmental agencies. For example, some states collect a tax based on hauling and freight operations income. A sales journal breaks out this type of sale and supports what you claim when you file a report. Verifying reported information is one important support feature of a set of books.

Good sales records are also helpful in finding the right market for your services. Because there are so many different kinds of contracting markets, you must know which ones will let you compete most profitably. You must develop an understanding of the financial effects of providing or not providing a particular kind of service. For example, you might assume you're making money in one type of work. Good records will help you determine exactly how your company is doing in that area. The result will help you decide which types of jobs are best for your company.

Sales records should provide information on specific jobs as well. There is more than one way to account for income. Picking the best accounting method to use can have a dramatic effect on your financial statements and tax liability. Don't just leave these decisions to your accountant. When you understand reporting methods and their consequences, you'll be able to evaluate alternatives yourself.

Receivables

Naturally, you need to know who owes you money. Your method of keeping track of receivables is important to the accuracy of your billings, your collections, bad debts, and financial statements. Contractors have special problems with receivables because there are considerations such as retainages. You need to account for these withheld amounts separately from your normal trade receivables. And Census Bureau reports for many of the trades require information on accounts receivable.

Many builders run into their single largest book-keeping problem when it comes to keeping track of receivables. It takes a lot of record keeping and a lot of time to keep up a customer ledger. Finding a good method isn't always easy. Many apparently good ideas for saving time actually result in a greater workload, while providing you with less control. It's easy to come up with "improvements" that actually result in duplication of effort. Not only will you waste a lot of time writing down the same information two or even three times, but you soon lose touch with the real purpose for the work.

When you send a bill for work after the job is done (instead of receiving cash immediately) it's inevitable that you'll *never* collect some of your receivables. Surprisingly, many builders are very casual about doing work on credit. If your volume increases greatly over a short time, it's important to look at bad debt statistics critically. You might discover that the percentage of total receivables that go bad is increasing. Understanding the direction your bad debts are going gives you two advantages: you can budget for them *and* take the steps necessary to tighten up on collection procedures. This could reduce your bad debt losses.

When you check historical information on receivables and bad debts, you may discover a trend. But without detailed accounting information you won't have a clear picture of the direction you're going. You need more than a general familiarity with your own business affairs to make important decisions. You've got to have the facts, and understand the trends.

Checks

Knowing where your money goes is important for controlling direct costs and overhead. And besides controlling expenses, you need to come up with a good way to analyze costs by job. Your billings, which are based on actual spending, require 100 percent accuracy.

The check register is a listing of all checks, with expenses broken down into categories. It's important to write up this record each month, or even better, each week. It would be foolish to wait until the end of the year to construct a check register for the previous twelve months. Considering the number of checks most businesses write in a year, there would be no hope for any effective control this way.

Good controls require timely information. Watching from month to month where you're spending money gives you the information you need when you need it. Your accountant needs updated information to post your general ledger. Your analysis of budgeted and actual expenses must show a current total each month. The check register is essential for balancing your bank account as well.

Like most good sets of records, a check register should be flexible. You can set it up to provide a fool-proof method for checking the accuracy of your math. This requires listing all check amounts twice — once in a "total" column and again in a category of accounts column, such as "materials" or "office supplies." This is one case where writing something twice isn't a wasteful duplication of effort. A double listing gives totals for all expenses and also shows expenses by category.

To collect direct cost records by job, many builders make copies of invoices for the job file, or recopy the information from the check register. This *is* duplication of effort. Both of these methods waste time and accumulate incomplete information. Instead, break down your check register by job to save time. Make your check register the primary control tool.

The check register is also a primary source of other important information. Your check register can be arranged in many ways. The method you use should fit your business. Your books and records, if efficient and flexible, can be worth the investment you make in them many times over.

Payroll

Complete payroll records show you labor costs by job and provide information essential for union reports and payroll tax returns. Many of these records are required by law. Your records, in addition to being useful, should be designed to meet the legal requirements. Otherwise, you'll spend extra time going through and reorganizing your records every time a payroll report is due.

A necessary part of payroll bookkeeping is organization. Breaking out information by job can be difficult if you have to start from scratch to construct

a report for each different kind of information you need. Here again, you can avoid the cumbersome and lengthy paperwork so often seen in payroll methods.

Too few builders attempt to track their actual labor costs by job. Many contractors base their billings on a fixed rate per hour worked by each classification of employee. This method has obvious shortcomings. A truly useful and efficient method computes the actual cost at the same time the payroll is prepared and checks are made up. All payroll (except overhead payroll like the office staff) should be assigned to one or more job categories. That way you immediately know your direct labor cost. Job categories should include not only those for large bid contracts, but for various one-time jobs, shop, maintenance, or idle time.

Bank Accounts

Don't depend on your bank to keep your checkbook straightened out. Balance your bank account every month to be sure how much cash you really have. It's not hard to balance a bank account, although many builders think it is. The secret of breezing through a bank account is having a good money-handling method and understanding exactly how your method works.

Having your accountant balance your bank account is poor practice and an unnecessary expense. No one knows your checkbook as well as you do. After all, if you add up your own bank deposits, prepare your own checks and figure all the math, who's better suited to prove the balance? And if you make yourself responsible for this job, the side benefit is that you're likely to work more accurately. You won't have to find so many mistakes at the end of the month.

Some builders hardly ever balance their bank accounts. That's a dangerous omission. You may suddenly discover that you don't have nearly as much cash as your checkbook shows. Errors can accumulate over the months or years. By the time you discover the problem, it could be too late to correct it without embarrassment. There is no "good" time to be out of funds.

You might even discover that you have more than you thought in your bank account. While this might be a nice surprise, it's less likely, and can still have a negative effect on your business. You might miss an opportunity if you mistakenly think you don't have enough cash to finance it.

Don't assume that the bank statement's ending balance shows your true cash condition. The bank

statement doesn't reflect checks that haven't cleared. Unless you balance the account, you don't know the real balance.

It doesn't always occur to business owners to check the statement for bank errors. But everyone should do this. Banks, and their computers, are run by humans who can and do make mistakes. It's up to the business owner (and bank customer) to discover these errors. Do yourself a favor, and spend a little time to check their work. You may be lucky and never find a mistake. If that happens, stay with that bank. You might not know how lucky you really are!

You need a thorough, step-by-step procedure to follow. I'll outline a procedure in this guide. If you follow all the steps completely, the bank account will balance every time. The only way to learn is to do it yourself. Once you're used to it, the whole procedure will become quite routine.

Cash on Hand

Most builders need a cash fund for the little expenses that come up from day to day: C.O.D. deliveries, postage due, coffee and donuts, a newspaper — expenses too small to write out a check for. But you may be amazed at how much cash you can spend in a month from a small office fund.

Setting up a controlled petty cash fund is the best way to control these disbursements. In a petty cash system, you "vouch" for all expenses by replacing cash removed with a slip of paper (a voucher) that explains the reason for the expense or lists an account number and gives the amount.

This fund should contain enough cash to suit your needs. If you run out often, the fund is too small. But keeping too much cash around the office isn't a good idea. So find the smallest amount of petty cash that's right for your business.

You should be able to add all the cash and the vouchers in the cash box at any time and arrive at the defined petty cash fund balance. You can expect occasional minor over and short problems, but a well-controlled fund will always be in balance. Document fully all of your expenses — even the petty ones — so you can take the full tax deduction you deserve.

Equipment Records

Few builders can operate without owning some machinery and equipment. Depending on your specialty, you may need everything from carpentry tools

to multi-axle trucks. The money you spend on tools and equipment is most likely your largest investment. Good equipment records supply information for financial statements, property taxes, capital gains and losses, motor vehicle reports, and depreciation. Your equipment records can also supply direct cost information, if the data is organized and available.

Your records should let you calculate the hourly cost of owning and operating your equipment. Each job can then be charged appropriately for its share of the equipment cost. This is essential for determining the profit or loss on each of your jobs.

Your equipment cost will also have an effect on how you plan for the future. Should you lease or buy heavy equipment? How much use will you get from a piece of equipment, and will that use justify the investment it will require? When you prepare bids on future contracts, you must know how much per hour to charge for operation of equipment and machinery for those projects.

Overhead Expenses

The fixed, necessary expenses of being in business are often considered to be uncontrollable: rent, telephone and utilities, shop and office supplies, insurance. You should have some way to plan for these expenses because planning can help you control your overhead.

Control of your overhead is important when estimating future jobs and will often make the difference between profit and loss. Your record of past overhead expenses is the best indication of what you can expect in the future. A good budget for overhead expense will serve as an important guideline for month-to-month planning. Trying to stay within a realistic budget will almost always lower actual expenses and increase profits. Builders who don't budget their overhead expenses invariably spend more on overhead than those who examine and control them.

Estimating Records

Job estimates are often prepared in a hurry and under pressure. But estimates require both attention to detail and accuracy. You have limited time to familiarize yourself with the proposal and come up with a profitable but competitive bid. The method you use to figure labor time, material cost, overhead, and profit must guarantee accuracy. Otherwise, your bid may be successful but you could lose money on the job.

Following a set procedure on every bid will save time and assure better accuracy. Use the same formula for every bid to make the entire estimate fall together smoothly. Document your costs so you have both historical data and current knowledge. This is the best way to assure yourself that the bid will yield a reasonable profit.

To have this confidence in your estimating, your books and records have to be organized to supply the kind of accurate information you need in a hurry. The best estimators use carefully prepared past cost records to back up their conclusions.

Records by Job

If, like many contractors, you work on several jobs at one time, you can only know how you're doing if you keep cost records for each job. Your right to progress payments depends upon these records. Accuracy is required to support your charges.

Use by-the-job records to examine your cash flow and profits. Your method should be complete and consistent. Since you're the one person most in touch with your operation, you're best qualified to keep these kinds of records. And you're the person most likely to get useful information from them.

Compare the costs for each job against your estimate. Modify your planning and estimating expectations accordingly. Doing this will help you develop valuable historical information which you can use in the future.

You may find that your profits from one job are being eroded by two others, even though you thought you were doing well on all three contracts. A builder can't tell how he's doing on each of several jobs without good cost records for all of them.

Accruals

Cash received and paid out in a business does not reflect the whole financial picture. Bills you've sent out are income, even before the cash comes in. And the bills you owe are direct costs or operating expenses, even before you mail the checks. These billed accounts are very real parts of your financial picture at any time. Your books and records are only summaries of cash which has changed hands. The true and complete picture of your operation has to include adjusting entries. These are called *accruals*.

It is generally a good idea to let your accountant handle these entries, as well as the actual general ledger recordings of all your financial activities. But

you should understand what is accrued, and why, so that you can set up records to help your accountant establish accurate accruals. He or she can't make the correct entries unless you maintain good records. Too often, accruals are only estimates. You'll be forced to understate your accruals if your records can't support the actual numbers.

You don't have to become a professional accountant to know how to break out the significant figures in your books. This book will help you increase the quality of all financial records your company maintains.

The Chart of Accounts

The chart of accounts is a numbered list of the accounts on your general ledger and operating statement. It tells at a glance the financial categories you maintain. Numbered accounts simplify your record keeping and provide a shorthand method to apply costs and income.

There is a common and fairly standard order for listing accounts within categories. While each business has its own unique needs, most use a few basic accounts. Construction contractors, more than most other businesses, have a large number of account categories that are unique to the industry. You should understand how the chart of accounts is organized. As you become more aware of the uses and potential for your own records, you might want to create additional categories to help you keep track of certain key expenses.

Within one set of books and within one company, it's possible to have integrated accounts for a variety of jobs kept under separate accounting methods. A good chart of accounts is descriptive enough to keep these figures separate from each other and yet supply important overall information necessary for reports.

Ratios

Financial and operating ratios are very useful to builders and contractors who understand their meaning. These ratios show the month-to-month trend of your business. These trends are useful and revealing financial statements themselves.

It's hard for you to learn everything you need to know about your business by looking at the monthly numbers. Ratios let you divorce yourself from dollars and cents and follow instead the trend of your business. Ratios help you find the good and the bad situations and show the relative health of your business. It

takes only minutes to figure your own financial and operating ratios but they can speak volumes about how you're doing each month.

Financial Statements

Most business owners don't know how to read financial statements. But nowhere is the skill of comprehending a statement so important as it is in construction. Builders who don't understand simple accounting practice and the usefulness of financial statements are ripe for failure in their business.

You must make effective use of your own internal reports and involve yourself directly in record keeping. And you've got to be able to understand your own financial statement. This includes knowing the statement categories — where the numbers come from, what the account titles mean, and what the classifications on the statement are. You have an accountant, so you don't have to master the mechanical skills of double-entry bookkeeping to gain this knowledge. You don't want to become an accountant, but you do want to be able to read the statement you're paying for.

Preparing financial statements is a routine chore when the books and records are complete and efficient. But a financial statement can be useful in many ways. For instance, a statement that compares this year's performance to last year's is valuable for finding out whether your management skills are producing profits and whether your financial health is improving or declining. Another type of statement shows your income, costs, expenses, and profits by comparing them to previous data using different accounting methods. You can prepare statements of income or loss by job so you can compare the value of different types of work and different size contracts.

Current statements are essential for performance bonds and loan applications. An impressively complete statement is more likely to result in a needed loan being granted, simply because more than enough information is available to answer any questions a banker might want to ask.

Small Business Administration (SBA) loans require extensive historical and financial information. Your past records must serve this purpose. Complete, accurate applications result in less processing delay.

The System in Review

Any good set of books will yield the financial statements and reports needed for insurance companies, governmental agencies, and bankers. There may

be special considerations in your business that dictate changes in the way you keep your books. By the time you finish this book you will learn many techniques that can improve the way you keep your business records. First, the way you keep records should be unique, designed just for you and your particular operation. Second, it should be as flexible as possible to allow for increases in volume and sudden changes in requirements. Third, there should be no room in your system for unneeded work.

You may come to a point where no manual system is good enough to take care of your payroll or your receivables. At that point, do you hire more bookkeepers and accountants? Do you struggle on with what you have, and hope for the best? Do you get in touch with a computer service? How do you decide? And whatever your decision is, can you justify the cost? This manual is intended to help you make decisions like this.

Just as some jobs could require over-investment in machinery or too large a labor force for you to manage, your bookkeeping system could be inappropriate for your individual needs.

Review your system periodically. How often depends on you. Your opinion of a review's importance will be reflected in the efficiency of your operation. Your own personality, then, is a major factor in any review.

■ Using a Computer

Most businesses today, even the smallest ones, use a computer, but many of them use it only for word processing. That's a shame. There's comprehensive, affordable accounting software available for any size business. And these are easy to learn and easy to use. Having your entire accounting system on a computer makes sense from every angle—they simplify your record keeping and save you time you can better spend out on the job site.

It's no longer so much a decision about whether or not to automate, but rather a decision about which system you'll use. To keep up with current record-keeping requirements, and considering the variety of functions you need to perform, computerization is something you'll eventually end up doing. But if you pick a system that doesn't do the job you need, you'll just end up fighting it and manually filling in for its shortcomings. You need a system that integrates accounting with job cost analysis; tracks costs and reports by the job; and lets you upgrade as your business grows.

In the best possible system, the initial cost of hardware and software (plus the cost of training yourself and your employees) is going to be more than offset by the savings you create. Ideally, your computer system will be useful for functions beyond merely recording transactions. You might need a sophisticated inventory control capability or a mathematical system that helps you with calculations in your particular field. For example, a heating systems sub can make good use of a program that calculates exact sheet metal sizing based on measurements taken in the field, saving time and reducing expensive mistakes.

If you have no idea where to begin looking for the best computer system and software for your particular business, you might want to hire someone to help. Be sure your consultant is completely qualified in the field and familiar with construction needs before agreeing to put out big bucks to get an opinion. A valuable consultant will be someone who has worked with other contractors to locate and design the best possible systems. Check with other contractors whose opinion you trust. They might be able to recommend someone. Or, they might be willing to show you the system they use in their business. As a general rule, people who are happy with their computer system like to show it off. Like a shiny, powerful new car, a good computer system looks good and goes fast!

If your operation is so small that you can manage your accounting system without a computer and without taking up a lot of your time, then it makes sense to keep things the way they are. But it's going to become increasingly difficult in the future to avoid electronic record keeping and reporting. The trend is toward filing payroll and year-end tax reports by computer; working with others who have automation; and starting out in an automated environment rather than upgrading to one, as people did in the past. Computers are simply a part of everyday business life.

Smaller contractors who can't afford, or choose not to afford, an automated system have another alternative. You can hire an outside accounting firm to keep your books on an automated system. In other words, sub out the whole accounting routine. That way, you need only to supply the raw data to the accounting firm, and they'll do all the number crunching and reports for you. By working with an outside firm, you can also get job cost analysis and any other data you need.

Most small firms (with 20 or fewer employees), and many larger ones, find it practical to use an outside service for payroll. The complexities of calculating payroll deductions, cutting checks, and taking care of

federal and state reporting make an outside payroll service a good idea. Payroll is too complex to do yourself unless you have a big-enough operation to justify the cost. Even then, a cost comparison might show that an outside service can handle payroll (and perhaps some other accounting routines) more economically.

Pick an automated system by matching it to your needs and allowing room for growth. Appendix C has some suggestions that will help you to pick the best computer system for your business. You can also check online for good accounting software. Here are some websites you might want to visit:

<http://www.accountingshop.com> — This site lists several software programs, including prices, and has an online ordering service.

<http://val.looksmart.com/eus1/eus65300/eus65317/eus171762/eus77143/r?l&> — Go to this Web page and then search for “construction software” to see a listing of construction software programs.

<http://www.timberline.com/> — This Web site belongs to a well-established company specializing in construction systems. They offer a variety of specialized programs suitable for the needs of many construction companies.

Income Taxes

The federal and state tax systems certainly haven't made your job any easier. Keeping your books and records just to verify your transactions is only the starting point; the government constantly considers new tax reform legislation, so keeping up with your reporting demands is an ever-changing task.

It's not just the disruption to business and personal reporting that causes trouble. As tax laws and regulations change, your accounting requirements change, too. A slight modification in the rules could mean you need to revise the way you keep records. If you work on government projects, the reporting is further complicated because reporting goes far beyond just reporting your numbers. You might also need to summarize specifics of the work crew you hire, meaning you have to track many more types of information, and not just hourly rate, hours worked, deductions, and jobs worked.

The rules for different accounting methods can change, too. As Congress passes new laws and the IRS comes up with new regulations affecting the methods you use for the timing of income reporting,

your accounting system has to be modified to keep up. The rules and regulations concerning capital gains, depreciation, and the tax rates themselves have changed regularly over the years. Congress modifies tax rules, for both economic and political reasons, and business owners are forced to spend dollars to keep up. That's a form of expense that produces no tangible results, just a lot more paper.

These changes affect your ability to forecast effectively. A large part of your job is to calculate what steps you need to take today to ensure profits in the coming year. So you forecast income and budget your expenses, all the while trying to ensure that you'll have enough cash on hand to pay operating expenses as they arise. This is no easy task even in a stable tax environment. The problem intensifies when you add in the uncertainty of future tax rules and rates.

I'll suggest a solution: Keep efficient, complete records of all transactions and reduce exceptions to the rules. In other words, try to make your bookkeeping chore uniform so that it works well and takes up as little time as possible. At the same time, set aside time for yourself so that you can think about the coming 12 months and plan your income, costs and expenses as far in advance as possible. As a business owner, you already know that your planning time is a smart investment in your own future. Add to this schedule the valuable help of a reliable and professional tax expert who talks *to you* and not *at you*, and your plan will have all the basic building blocks to ensure profits and reduce surprises.

For your tax planning requirements, you might want to get a copy of *Contractor's Year-Round Tax Guide*. Use the order form bound into the back of this manual to order a copy. I wrote that book with a very specific purpose in mind — to help contractors think ahead in terms of tax liabilities, so they can plan their business affairs to reduce taxes as much as possible, and still play within the rules. That book won't tell you how to fill out your tax forms, however. You need a specialist for that. Besides, by the time you read this, they'll surely have changed. But it will help you to think in terms of taxes and your business, and show you how to plan accordingly.

There's no way that you can keep up with all the changes in the tax rules. Tax laws are rewritten virtually every year, and the “simplification” ideas that Congress comes up with almost always make the whole process more complicated than before. Remember, “simplification” is one of those Washington terms that mean exactly the opposite! So you definitely need professional tax advice just to keep

up and to make sure you're complying with the current rules. It's the tax professional's job to track all of those changes and then tell you what you need to do.

You can get a complete list of downloadable IRS forms and publications at the government Web site:

http://www.irs.ustreas.gov/prod/forms_pubs/forms.html

Forms

Rather than constantly recopying or redesigning the forms you use for working up information or preparing your reports, you need a set of good, usable and practical forms. They will almost certainly be developed by trial and error over a period of time. Throughout this book you'll find examples of accounting forms, some blank, some filled out. These are forms the author uses in his business and the construction companies he consults for — forms he's developed and improved until they're exactly what worked for him. Feel free to copy any of them, change them to fit the needs of your company and your way of doing business, add your own letterhead, and make them yours.

Most businesses now have a set of forms loaded into their computers, to fill out and print as needed. Many builders now simply provide online forms to their customers and suppliers. You can type any of the forms in the book into your computer, or check the order form in the back to find a description of *Construction Forms & Contracts*. It has 125 forms for construction contractors, including two dozen accounting forms. You can copy and use the forms from the book, or load them on your computer from the enclosed disk and customize them to meet your needs.

Only you can decide what kind of records you want to have in your construction business. But keep in mind that your accounting professionals depend on your books and records for just about everything they do for you. Sales, property, payroll, and income tax returns, financial statements, and reports are all based on the information you provide. A complete system will furnish the information your accountant needs, when it's needed. Advice is your accountant's most valuable service. That advice can only be based on your books and records. Make sure those records accurately reflect your business activities.

Double-Entry Bookkeeping

The most common modern bookkeeping method is called double-entry bookkeeping. I doubt that any alternative method can be found to provide the same

degree of bookkeeping control yet remain as simple to use. Training and experience are required to fully master double-entry bookkeeping, and you shouldn't expect to become sidetracked into a bookkeeping career just to manage your operation's affairs. But it's always smart and good business practice to know every aspect of your operation, especially the books, records, and management systems. The following overview of the double-entry method should help you better understand the rest of this book and give you enough bookkeeping knowledge to let you maintain and understand your own books and records.

Double-entry bookkeeping is so called because every transaction requires two entries — one debit and one credit. Two entries provide an important control throughout the bookkeeping documents that isn't available with any other system. A debit is an entry made to the left side of an account, and a credit is an entry made to the right side. The total of all the debits always equals the total of all the credits. The total of all accounts will be zero if the general ledger is accurate. In other words, the debit balances (pluses) and the credit balances (minuses) of all account transactions will cancel each other out when the accounts are added up.

Some accounts normally have debit balances, and some normally have credit balances. A complete summary of typical accounts and their balance types is listed below.

Assets:	Debit	Credit
Cash	xxx	
Accounts Receivable	xxx	
Bad Debt Reserve		xxx
Fixed Assets	xxx	
Depreciation Reserve		xxx
Liabilities		
Accounts Payable		xxx
Taxes Payable		xxx
Notes Payable		xxx
Net Worth		
Capital Stock		xxx
Retained Earnings		xxx
Sales		
Income Accounts		xxx
Cost of Goods Sold		
Materials	xxx	
Labor	xxx	
Expenses		
Operating Expense Accts	xxx	

Journal entries are created to change the balances in various accounts. A good example of a journal entry is shown below. Here, a builder wants to show the effect of bank charges on his bank account. He must reduce his cash account by the amount of the monthly charge. He must also increase his expense account for bank charges.

	Debit	Credit
Bank charge expense	\$4.82	
Cash in bank		\$4.82

The debit increases an expense account (expense accounts are usually debit-balance accounts) and decrease the balance of cash (also a debit-balance account).

The General Ledger

All entries to the general ledger — the record that summarizes all business operations — are made from journal-type entries consisting of equal debits and credits. These entries are readily apparent in a general journal. But entries from a *cash receipts journal* require a different format. One column represents the total of cash received. This becomes a debit (increase) to the cash account. Other columns, dividing the total into appropriate categories, are for credits to income,

accounts receivable, and sales tax accounts. Debits and credits will always balance to zero.

A *cash disbursements journal* (cash paid out) has several columns, as well. One column represents the total decrease to cash. This total decrease is entered on the cash account as a credit. Distribute the total decreases to various cost and expense accounts as debits. Again, the total of all debits and credits in the cash disbursement journal will be zero.

Figure 1-1 shows the traditional ledger page. Debits are posted on the left side and credits on the right. The balance in an account — the net remaining amount when credits are subtracted from debits — is written under the last amount posted on one side or other of the account. Which side this is depends upon which side has the higher total amount. If the debits are greater than the credits, record the net total on the debit (left) side. If credits are greater, record the net balance on the credit (right) side). Recording on the right side would result in a *credit balance*, or negative account total. Income accounts, liabilities, and net worth accounts usually contain net credit balances.

Figure 1-2 shows the result of posting to a single general ledger account from several sources. The T-account — so named because of the letter “T” created by the lines — is used here to demonstrate this. The T-account is simply a way of separating debits and

ACCOUNT _____

DATE			DEBIT	DATE			CREDIT
		✓				✓	

Figure 1-1
Ledger sheet

Cash In Bank		
	Debit	Credit
Balance Forward	\$1,486.80	
Cash Receipts	22,401.60	
Cash Disbursements		\$ 21,844.62
General Journal		4.82
Balance Forward	\$2,038.96	

Figure 1-2
T-account

credits on a worksheet. You can use it to estimate the results of business before financial statements have been prepared. In the figure, the Cash in Bank account has received three entries. The debit (increase) came from the cash receipts journal and reflects all cash collected in one month. The decreases come from the cash disbursement journal (showing the total of checks issued in one month) and the general journal (where bank service charges were recorded).

Several of the controls found in double-entry bookkeeping can be explained using the T-account summary as an example. First, the beginning balance and the ending balance of a cash account let you know how much is in the bank. These balances should agree with reconciled totals from the monthly statement the bank sends. Any errors or omissions by either the bank or your bookkeeper become apparent when the reconciled balance is compared to the general ledger account balance.

The general ledger will be *out of balance* if there's a posting error in it or if the math has not been carried through correctly. In other words, the grand total of all debits less all credits will not be zero. When this is the case, it means there's an error, and you must correct the error before you can prepare the financial statements. No confidence can be placed in a general ledger that is out of balance. You or the bookkeeper can be certain that all posting has been done correctly only when the general ledger credits and debits have been added to get zero.

Of course, since entries may be posted to the wrong accounts, diligence is still required in the posting process. No method can ever eliminate human

error, but double-entry bookkeeping does provide the best controls against math errors. Throughout this book, many additional controls will be discussed in relation to the many aspects of double-entry accounting and bookkeeping procedures.

The general ledger should not be burdened with large numbers of detail accounts, analysis and budgetary controls, or excessive detail of any kind. Keep secondary or subsidiary ledgers and accounts apart from the general ledger for these control details.

The Financial Statements

Financial statements are reports which express information summarized from the general ledger. Their format is designed to pass on information rather than to control a large number of detailed transactions. Financial statements reveal the status, progress, and control you have exercised, and the degree of business that has been generated as a result. These statements are only as accurate, informative, and concise as the general ledger they're based on.

The *balance sheet* is one of three main financial statements. It's a listing of properties (assets), debts (liabilities), and ownership value (net worth). The term balance sheet refers to:

- 1) The listing of account balances (or net totals when credits are subtracted from debits), and
- 2) Proof that all debits listed on the balance sheet are equal to all credits. The basic formula which defines the balance sheet is:

$$\text{Assets} = \text{Liabilities} + \text{Net worth}$$

There are two parts to the balance sheet:

- 1) Listing of all assets and a total of those accounts, and
- 2) A listing of liabilities and net worth and a total of those accounts.

Both totals (assets and liabilities/net worth) will be the same number. Therefore, the two sides will balance.

The *income statement* (also called statement of profit and loss or the summary of operation) lists income, direct costs, operating expenses, and profits. While the balance sheet lists the balances in asset, liability, and net worth accounts as of a specific date, the income statement reports the results of operations within a defined period (such as one month, one quarter, or one year).

The *statement of cash flows* (or statement of provisions and uses of funds) summarizes the management of cash during a specified period. It shows how the net profits of a business have been used — payment of liabilities, buying new assets, or distribution to owners — in the course of business. It also shows the source of funds. Funds may come from operations (profits), from the sale of assets, or from outside loans. Owner may contribute additional capital, resulting in an increase of funds. The statement of cash flows is useful in judging the degree of management control you exercise over your funds.

The double-entry system forces the user to perfect his entries before issuing accurate statements. If the general ledger is out of balance, the interrelationship of the three statements will be off. These relationships are summarized below.

- 1) Assets must equal the total of liabilities and net worth shown on the balance sheet.
- 2) The net income or loss must equal the increase or decrease to retained earnings shown as part of the net worth on the balance sheet.
- 3) The increase or decrease in funds shown on the statement of cash flows must equal the change in current asset and liability accounts. Current assets less current liabilities at the end of the period, *less* current assets less current liabilities at the beginning of the period, must equal the increase or decrease in funds.

The balance sheet reflects the value of a business in terms of properties and debts. All properties owned by the builder are subject to debts related to them. At the same time, part of those assets are truly owned. If debts, or liabilities, represent 60 percent of assets, and net worth 40 percent, that's a different picture than if liabilities represent 95 percent of assets, and owner equity only 5 percent.

This comparison of net worth to liabilities is called a *ratio*. Ratios are explained in more detail in Chapter 23. The financial statements provide information for several useful ratios needed by bankers considering loan applications and by the builder in assessing his own financial condition. Accurate financial statements and the ratios drawn from them help control costs and expenses, inventory levels, cash flow and accounts receivable.

The income statement shows total sales, direct costs, operating expenses, and profits within a period. Prepare this statement on a comparison basis to get the most value from it. Last year's income compared to this year's will reveal the good and bad trends in

the business and the increase or decrease in volume, expenses, and profits.

The statement of cash flows, which is often wrongly excluded from the set of financial statements, is in many ways the most valuable report you can have. Control of cash in the construction business is crucial to success. Many builders have problems in this area, and poorly designed cash procedures or lack of cash flow planning altogether can cripple an operation.

To build an accounting system that provides accurate financial statements, you need both documents and procedures that run smoothly. Otherwise, the office bogs down in its own paperwork, and nothing is completed in time to be of use. And the accuracy and availability of information suffers in a poorly-designed accounting system.

Figure 1-3 summarizes the relationship between the various reports, controls, and documents contained in an accounting system. Understanding this relationship helps a builder appreciate the value of his double-entry system, and the management benefits derived from a well-organized and thought-out operating plan.

Source documents — invoices, purchase orders, and receipts — must be handled efficiently to support the accounting journals and ledgers. Filing systems and methods for labeling and identifying source documents must be practical and time-saving.

The general journal must be controllable and concise. The cash receipts and cash disbursements journals that support it verify the math, report information legibly, and provide the detail needed for analysis of accounts.

Many secondary systems are required to control the general ledger accounts. Among these is a subsidiary control for accounts receivable. Most builders transact a large volume of business on credit. You must be able to render accurate statements to customers, control the level of receivables and bad debts, and set up reserves for future losses.

The general ledger is a summary document containing the least amount of information needed to produce maximum insight from financial statements.

At first glance, the double-entry system seems complex. But if you relate to the results rather than the mechanical processes, it gets clearer. However, you need to control those processes in order to produce concise reports. Without controls, no system of keeping books will yield a dependable, accurate, and

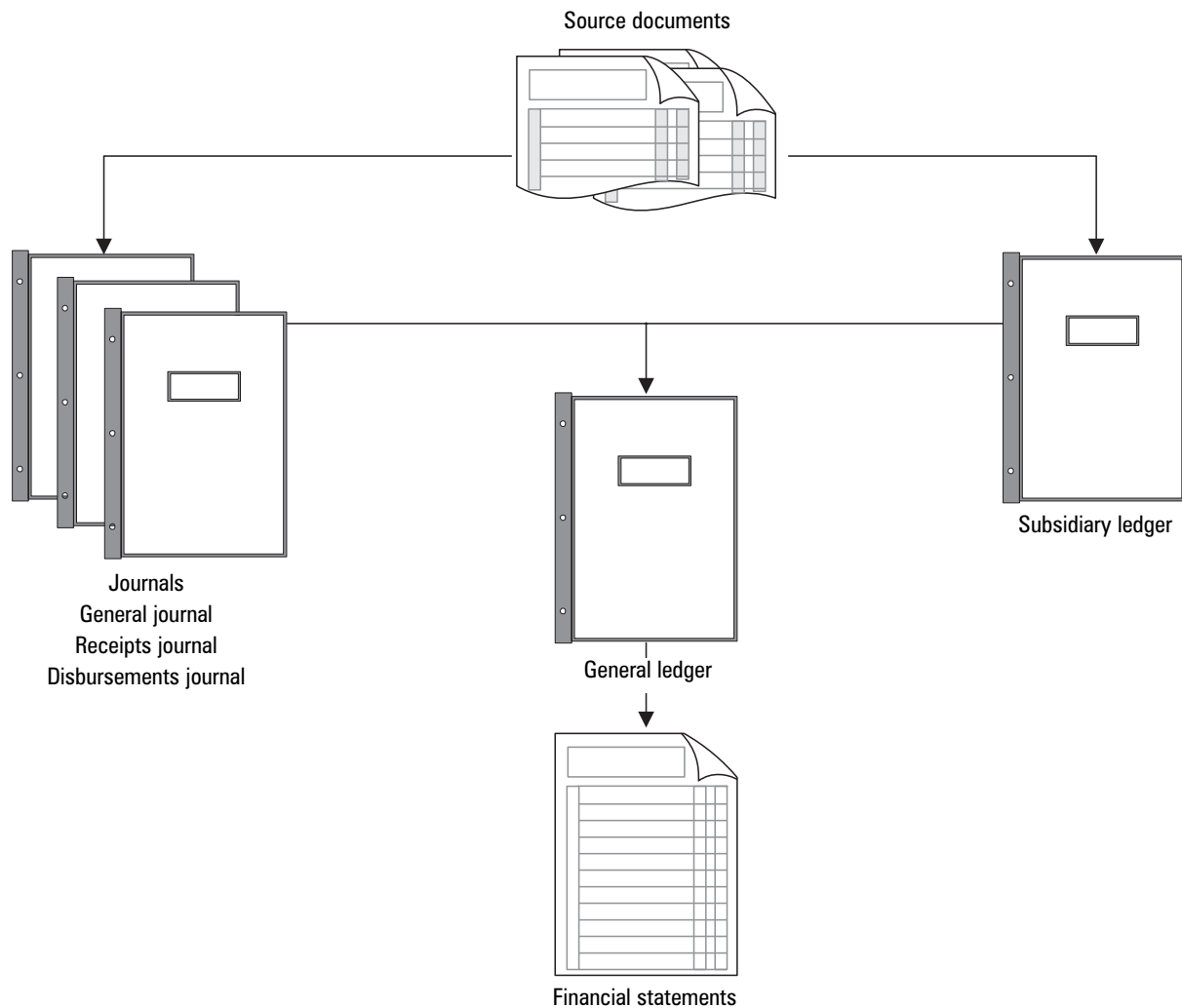


Figure 1-3
The accounting system

profitable financial statement. And you can't make profitable decisions based on misleading information.

The terminology of accounting can be confusing and misleading. Unfortunately, accountants and others who work in the field must, from necessity, communicate in the common language of accounting. Don't let this alienate you and keep you from fully understanding the meaning of your own books and records.

This book has been designed to introduce concepts that are useful in a practical way. Whenever possible, we've avoided specialized terminology that could confuse and mislead the reader. You're interested in understanding accounting from a builder's point of view, not from an accountant's. This text is not intended to train you to become a full-charge bookkeeper, but rather a well-rounded builder whose success is enhanced by his accounting system.

Test Questions:

1. You are required to keep records:

- A. Because it is required by law.
- B. For tax return preparation and planning.
- C. To keep track of where you're spending money.
- D. All of the above.

2. The check register is:

- A. A record of things you need to check.
- B. A listing of the checks you have written.
- C. A listing of checks returned by the bank.
- D. The bank's encoded number on each check.

3. Balancing your bank account involves:

- A. Visiting or calling the bank to get the balance.
- B. Avoiding writing any checks near the end of the month.
- C. Accounting for all timing differences and double-checking your math.
- D. Simply changing your balance to match the bank's balance.

4. Overhead expenses are:

- A. All expenses that can't be assigned to any one, specific job.
- B. Expenses involved with all work above the first floor of a project.
- C. Expenses that exceed budget.
- D. Expenses involved directly with a job, such as materials and labor.

5. Accruals in your books are:

- A. The sum of all unpaid liabilities.
- B. The sum of all assets you own.
- C. Expenses you owe but have not yet paid, or income you have earned but have not yet received.
- D. Entries made to make your books look better than they would otherwise.

6. Ratios are useful to:

- A. Summarize the results in a way that is less confusing or misleading than dollars and cents.
- B. Follow a trend in related outcomes.
- C. Control expenses from month to month.
- D. All of the above.

7. The chart of accounts is:

- A. A summary of all the people who owe you money.
- B. An orderly listing of inventory suppliers from whom you can buy goods on account.
- C. A device used by accountants to keep confidential information from those who don't have a need to know.
- D. A numerical listing of the accounts in your general ledger.

8. Double-entry bookkeeping:

- A. Is illegal, as you should keep only one, true set of books.
- B. A method used by embezzlers to skim money from their companies.
- C. Twice the work needed by a single-entry system.
- D. None of the above.

9. The correct formula for the balance sheet is:

- A. $\text{Assets} = \text{Liabilities} - \text{Net Worth}$
- B. $\text{Assets} = \text{Liabilities} + \text{Net Worth}$
- C. $\text{Assets} + \text{Liabilities} = \text{Net Worth}$
- D. $\text{Assets} + \text{Net Worth} = \text{Liabilities}$

10. The general ledger:

- A. Is a place for recording all entries that don't fit into the specific ledgers.
- B. Is used only for recording income.
- C. Is a summary of all transactions.
- D. None of the above.

11. Business equity is shown on the financial statement called the:

- A. Summary of Operations.
- B. Balance Sheet.
- C. Statement of Cash Flows.
- D. Income Statement.

12. Another name for the Income Statement is:

- A. Profit and Loss Statement.
- B. Balance Sheet.
- C. Statement of Cash Flows.
- D. None of the above.

13. The petty cash system documents cash expenses using a:

- A. Requisition form.
- B. Job cost receipt.
- C. Voucher.
- D. Deposit slip.

14. Under the rules for double-entry bookkeeping, assets are normally:

- A. Debits.
- B. Credits.
- C. Not reported in the books.
- D. Accruals only.

15. Overhead expenses describe those expenses that are:

- A. Over and above your annual budget.
- B. The fixed and necessary expenses of being in business.
- C. The same as direct costs relating to specific jobs.
- D. Costs that you can't control.

Accounting Methods

The way you treat sales (and recognize the income they generate) is the foundation of any accounting system you adopt. The decision about when to book income creates problems both for the builder and the accountant. After all, your contracts take anywhere from one day to several months — or even years — to complete. Solving this key problem requires that you define what you mean by income. Just exactly how much did you earn last month? There's no correct answer until you specify the accounting method you used. There are two accepted ways to record income: the *percentage-of-completion* method and the *completed-contract* method.

Percentage-of-Completion Method

For most businesses, recording income is a simple matter. Income is generally recognized when work is performed, and recorded when statements are mailed. In other cases, income is recorded when payments are received.

But contractors sometimes receive payments for work not yet performed, or only partially completed. The portion of income above the degree of completion is said to be *unearned* in the accounting sense. It is not earned and should not be recorded as income until the work is finished.

When you receive cash for work that's only partially complete, you have to separate out the unearned part of income and assign it to a special account. That sum will only be recognized as income later, after it is earned. Then you remove it from the special account.

This is known as *percentage-of-completion* accounting because you recognize as income only that portion of money received or charges billed for work that's completed. For example, suppose you receive a \$6,000 payment, or half the total contract price. You know that the job is only 40 percent complete. The entry would be broken down as follows:

Total payment (50% of contract amount)	\$6,000
Percentage of completion (\$12,000 x 40%), earned income	4,800
Balance, unearned income	<u>\$1,200</u>

Accountants handle situations like this by “deferring” the unearned income. Since this treatment is always based on your estimate of the degree of a job’s completion, you need adequate records and a consistent method for determining the status of work in progress.

The differences between *billed* or *paid* and true income can work the opposite way as well. This is a more common situation. For example, you estimate a job to be 40 percent complete. You’ve billed out or been paid less than 40 percent. The difference has to be taken into account or *accrued*. This way you recognize income before you receive payment, or even send out a bill. It is money that truly has been earned. Suppose a contract is for \$12,000 and is 40 percent complete. The following shows an accrual of earned income:

Total contract of \$12,000	
– 40% complete, earned income	\$4,800
Amount paid to date	4,320
Accrued income	<u>\$ 480</u>

While your accountant should make these adjustments when preparing a financial statement, he or she will depend entirely on your books and records. To do a complete job, your records must show complete data. Remember also to document the procedures you use to arrive at your estimate of the degree of completion. Naturally, you have to record both sales and accounts receivable as well as progress on partially-completed jobs.

Most contractors and builders use the percentage-of-completion method for recording income. It’s the only acceptable method for builders who have fairly large jobs in progress at the end of any tax period. You can base your financial statements on any consistent accounting method. But include a note on the statement if the reporting method differs from that used for income tax purposes.

Under percentage-of-completion accounting, your books reflect the effect of receiving payment either before or after it’s earned. Sometimes you’re paid in advance. Your contract may specify that you’re allowed an advance to fund expenses required in the early stages of the project. It’s much more common for your customers to withhold part of each progress billing as *retainage*. Retainages serve two purposes. First, they serve to guarantee against unforeseen problems with final completion of a project. Second, they’re an incentive for timely completion. Retainages are normally paid upon approved completion and acceptance.

In all cases of payment above or below the estimated percentage of completion, you accrue the deficit and defer the excess income.

The advantage of the percentage-of-completion method is that income and its related costs, expenses, and profits are recognized and reported as the job progresses. The term *recognized* refers to the accounting treatment of an amount. It’s another way of saying that the amount is acknowledged as being earned in the current period even though money is neither billed nor received.

Under the percentage-of-completion method, your financial statements give a fairly accurate picture of your financial position, including expected profits and losses. Since many jobs take several months to complete, this kind of financial statement is more meaningful.

The disadvantage of the percentage-of-completion method of accounting is that all income, costs, expenses, and profits are only estimates until the job is complete. When you say that a job is 40 percent complete, that’s an estimate based on your judgment. It isn’t an exact degree of completion. But if you have current information and use a good estimating system consistently, your estimates of completion are probably pretty accurate.

You’ll eventually record all income and costs under any accounting method. Percentage-of-completion accounting simply gives you a more accurate picture of what is happening while you still have time to make corrections.

The estimates you use to determine the degree of completion must be based on reliable and current information. Your construction cost estimate will be a good guide to the value of work completed. If you’ve revised your cost estimate, consider this in your completion estimate. The most reliable indicator of the degree of completion is your total of project-to-date costs and your *current estimate* of the cost of the work yet to be done. If you use your original estimate to compute the degree of completion, the accuracy of your completion estimate would vary as your actual total costs have varied. If you now estimate that a job will cost \$575,000, don’t use the original estimated cost of \$500,000 in computing the percentage of completion.

Find the current percentage of completion by adding the *total costs to date* to the *estimated costs to complete* and divide that total into the *costs to date*:

$$\text{Costs to date} \div (\text{Costs to date} + \text{estimated remaining costs of completion}) = \text{Percentage of completion}$$

■ Completed-Contract Method

Recognizing income by the completed-contract accounting method has the advantage of exactness. There is no need to estimate the degree of completion because all income is recognized only when the job is 100 percent finished. This method is almost always used for small jobs — one-time work, material sales, isolated minor contracts, and any other job of short duration. Payment for such work is usually in one installment. There is no need to estimate the degree of completion because you are paid or send a bill for the work at about the same time you know exactly what the total cost was.

You can use completed-contract accounting only when you'll complete a job within two years from contract date, and only if your annual gross receipts are under \$10 million.

■ Percentage-of-Completion / Capitalized Cost Method

The Tax Reform Act of 1986 created a new form of accounting called the *percentage-of-completion / capitalized cost method*. Under this rule, you are allowed to use completed-contract accounting for only 60 percent of the total income and expenses of a job. The balance must be reported under the straight percentage-of-completion method.

■ Which Method Should You Use?

Tax reform has complicated the decision of whether to use one accounting method or the other. You're required to choose one method and stick with it unless you apply to the IRS for permission to make a change. But the new rules restrict your freedom to choose a more advantageous method in many circumstances.

You'll have to base the selection of one method over another on the restrictions of current tax law. Within that framework, seek professional tax advice in the selection of the best method — and the one that you can best manage. It should always be your goal to keep it as simple as possible. But given the complexities of the tax laws, that won't always be easy.

Assume that you have several large, ongoing contracts and you're reporting income and profits under the percentage-of-completion method. Quite likely the jobs vary widely in profitability. After all, each job is unique. This might be a good description of just about any builder's current situation. A builder using the percentage-of-completion method will usually find that changes in profit on any single job are absorbed over several monthly accounting periods. By using this method, there is less chance that a single accounting statement will reflect all of a major change in profitability.

Now, assuming the same circumstances, what would the result be using the completed-contract method? The year of completion on the larger contracts will show a major change in volume. This makes monthly or even annual comparisons useless and distorts the true financial picture of the business.

Suppose you bid on a contract which you estimate will yield \$150,000 net profit after three years of work. Under the completed-contract method, you recognize all income, costs, expenses and profits upon completion of the job. During the life of that contract, you won't recognize any of the work done or payments received. Your financial statements will be prepared as though that income didn't exist. All the income and costs will be held in reserve accounts set up to delay recognition of income.

There are three major disadvantages of the completed-contract method. First and most obvious, there's the problem of not recognizing some very real progressive profits over the three-year life of the job. Second, it doesn't let you produce periodic financial statements that reflect your company's true status. And third, it doesn't provide you with reliable data that you could use to improve profitability during the life of a large contract. Cash control, budgeting expenses, inventory handling, and profitability problems must be spotted early to make prompt corrective action possible. Completed-contract accounting only gives you final results. If you want to do careful analysis under this method, you must create the data yourself; the current financial statement won't help.

We can illustrate the weakness of the completed-contract method by looking at a builder with three large contracts. We'll assume that the degree of completion on each of these jobs will be fairly even throughout the life of each contract. All three contracts began at the same time and should last for 36 months. Assume that the total expected profit for all three contracts is \$450,000.

The net profits over three years would be:

Year	Percentage of Completion	Completed Contract
First year	\$150,000	-0-
Second year	\$150,000	-0-
Third year	\$150,000	\$450,000

This is a simplified example, but the message should be clear. Deferring income, as you must under the completed-contract method, means that you lose data that would be valuable for comparisons. Furthermore, financial statements aren't realistic under the completed-contract method. Note that three years' net profit is thrown into one tax year. This last point is especially important to remember when you have several relatively small contracts and an occasional huge one. The tax consequences could be devastating. Progressive tax rates favor spreading profits evenly over several years.

In spite of its disadvantages, the completed-contract method can be useful in some circumstances. The first step in choosing the right method for you is to check your financial data for the last few years. Then discuss the choices with your accountant.

Some contractors find the completed-contract method meets their needs. Others adopted this method when they first began work and never bothered to change in spite of considerable growth. A small builder specializing in residential repair work can use the completed-contract method because nearly all work is of short duration. But if the type of work he performs begins to include longer duration jobs, he may have good reason to adopt the percentage-of-completion method. Progressive recognition of profits from larger contracts results in a continuing flow of profits and allows for easier growth and planning.

Too many builders continue to use the same accounting method even though their type of work has changed. Periodically review your accounting procedures.

Combined Accounting Methods

Most contractors have to do more than one type of work to stay profitable. And most take on both long duration contracts and miscellaneous small jobs. Different accounting methods might be appropriate for the different kinds of jobs. But combining accounting methods in your business can complicate record keeping. Consult with your accountant. Learn how to set up a general ledger that lets you maintain

separate records for your different classifications. This chapter should give you all the background you need so you can work with your accountant to make the important choices.

Like many contractors, you'll probably want to use the percentage-of-completion method for long duration contracts and keep shorter jobs on a completed-contract basis. The remainder of this chapter explains how to use one or both of these accounting methods in your business.

Remember in the beginning of this chapter we discussed accruals and deferrals of income. Both the percentage-of-completion and completed-contract methods require accruals and deferrals. Under percentage-of-completion accounting, all retainages are accrued as income. Any prepaid income (paid before it is earned) must be deferred. Under completed-contract accounting, all income is deferred until a job is complete. But, upon completion, it may be that part of the total contract has been paid before you close your books. In that case, a portion of your income would be accrued.

Keeping Books for the Combined Method

In order to include both kinds of contract treatments in one set of books, you need two accrual accounts and two deferral accounts:

- 1) Earned income account
(on percentage-of-completion accounts)
- 2) Earned income account
(on completed-contract accounts)
- 3) Deferred income account
(on percentage-of-completion accounts)
- 4) Deferred income account
(on completed-contract accounts)

The earned income accounts are assets. The deferred income accounts are liabilities. The series of accounting adjustments which can flow through these accounts is complex. Remember that the purpose of all the adjustments is to give you a true picture of earned income. Your accountant can sort out the complexities of the entries. You only have to be concerned with maintaining an efficient procedure to support the adjustments.

There are two things that happen when these adjustments are taken in your general ledger. First, billings are adjusted to reflect earned income, and second, the accrual (earned income) and deferral accounts are adjusted to reflect the current balances of those assets and liabilities.



Figure 2-1
Flow of income and adjustments — income

Figure 2-1 shows the flow of adjustments for income, starting with Total Current Month's Billings and arriving at Current Month's Earned Income. This schedule summarizes the entries your accountant will make and shows the effect of those entries on income. You should also know how to handle the distribution of costs and income to these accounts. For each account (*Earned Income - Asset* and *Deferred Income - Liability*), the current balance replaces the prior bal-

ance each month. Your deposit records and check ledger support the changes and summarize the information. You can go back and audit the account balances when necessary.

Figure 2-2 shows the flow of adjustments for the *Earned Income (asset)* account. Each month's entry consists of replacing the prior balances with the current month's balance. It may seem at first that it would be simpler to add the differences each month to

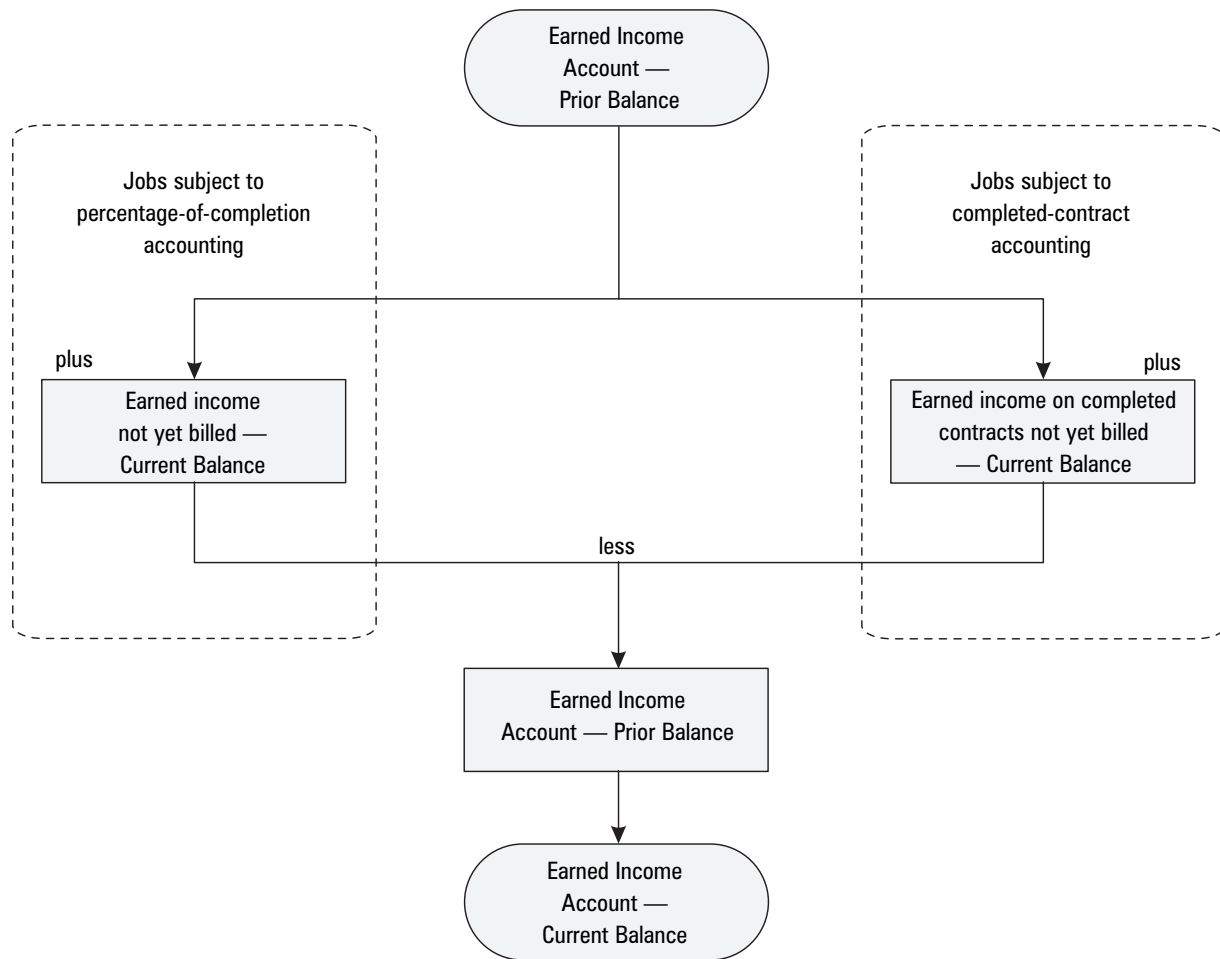


Figure 2-2
Flow of income and adjustments — earned income (asset)

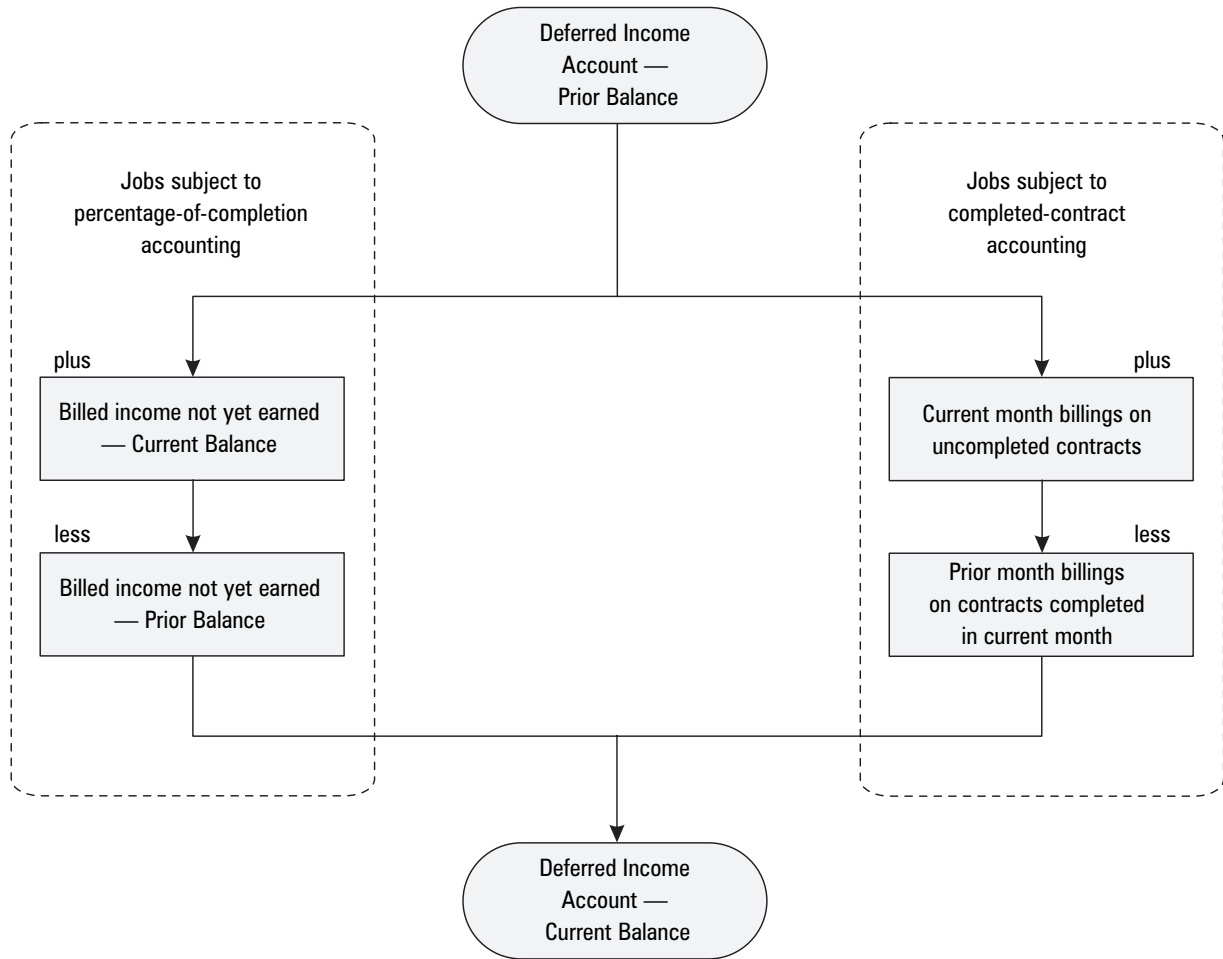
update the balance, rather than completely replace it. But it's more reasonable and easier to compute the year-to-date totals each month. In addition, each month's worksheet computes the total account balance. Otherwise, some part of the account balance could be active for months. In those cases, it would be harder to account for the items that make up the account balance.

Figure 2-3 shows the flow of adjustments for the *Deferred Income (liability)* account. Like the asset account, the current balance replaces the prior balance. The one exception to this procedure is for the "prior month's billings on contracts completed in current month" within the completed-contract accounting section. Some prior months' billings will remain in this account for several months, pending completion of a contract.

The processes explained above should help you understand the flow of income, as well as the offsetting effect on the accrual and deferral accounts. It isn't necessary to maintain your own general ledger or become proficient in accounting theory. But you need a good working knowledge of this income recording procedure and its control to communicate with your accountant. A general understanding of why these accounts are required is enough. Later chapters will explain how totals are posted to the accounts described.

Verifying the Accounts

The verification of the account balance is detailed in Figures 2-4 and 2-5. Complete your monthly worksheets using this or some similar method and it will be easy to verify the detail of accrual or deferral

**Figure 2-3**

Flow of income and adjustments — deferred income (liability)

accounts. The illustrations show how sales are broken into categories so an accountant can make adjusting entries quickly and easily.

Figure 2-4 is a degree of job completion worksheet for jobs that are being accounted for under the percentage-of-completion method. Part of your income from these contracts is for completed work, and part is for uncompleted work. Since income on uncompleted work is not reported, this part must be separated out as deferred income. The income in the current month for completed contracts (plus previous months' billings for jobs completed this month) is considered earned income. Remember, it's possible for a previous month's billings to remain as unearned if those contracts are not yet complete.

Note that this worksheet also adds the current month's percentage-of-completion billings to the

completed-contract billings to arrive at a control total. This total has to match "total billings" on the Sales Journal, which we'll discuss in the next chapter.

The totals on Figure 2-4 are transferred to Figure 2-5, the earned income summary. Here, figures developed under both accounting methods are summarized on one worksheet. The current month's income, accruals and deferrals appear here. Figure 2-5 documents the changes in asset, liability, and income accounts — an important feature that supports the general ledger summary accounts.

Too often, reports that are meant to support general ledger accounts and totals don't provide enough information. You can't prove an entry unless you can trace it to its origin. Reports like the earned income summary, prepared the same way each month, make tracing entries very easy.

Johnson Construction Company
Worksheet, Degree of Job Completion
March 31, 20__

	(1)	(2)	(3)	(4)	(5)
	Amount				
Name	Previously Billed	Amount Billed This Month	Total Billings (1) + (2)	Contracts Completed	Contracts Not Completed
Black's Landscape	—	\$1,600.00	\$1,600.00	\$1,600.00	—
M. Brown	—	482.11	482.11	—	482.11
C. Carlson	—	641.27	641.27	641.27	—
L. Carlson	—	173.05	173.05	173.05	—
Harvey Contracting	—	1,695.00	1,695.00	1,695.00	—
Hauser & Sons	—	25.00	25.00	25.00	—
J & J Paints	—	45.00	45.00	45.00	—
Jim's Contracting	—	360.00	360.00	360.00	—
L. Jones	—	74.00	74.00	74.00	—
LBN Brothers	—	355.00	355.00	355.00	—
K. Middleton	—	145.37	145.37	—	145.37
Midfield School	—	82.17	82.17	82.17	—
Mitchell & Sons	1,500.00	7.50	1,507.50	1,507.50	—
B. Ottman	—	169.34	169.34	169.34	—
L. Peterson	—	477.55	477.55	—	477.55
Regal Apartments	—	1,250.00	1,250.00	—	1,250.00
Riley Landscape	—	3,900.80	3,900.80	3,900.80	—
J. Smith, Builder	—	525.00	525.00	525.00	—
D. Thomas	—	706.08	706.08	—	706.08
Triumph Const.	3,000.00	—	3,000.00	3,000.00	—
Walton's Plastering	600.00	903.00	1,503.00	600.00	903.00
Woodman	—	425.00	425.00	425.00	—
J. Woods	—	295.80	295.80	295.80	—
Total	<u>5,100.00</u>	14,338.04	<u>19,438.04</u>		
Percentage-of-completion billings		<u>13,819.86</u>			
Total billings (control total)		<u>28,157.90</u>			
Total Income Earned in Current Month				<u>15,473.93</u>	
Deferred Income					<u>3,964.11</u>

Figure 2-4
Degree of job completion worksheet

The work accounted for under the percentage-of-completion method is listed by the total contract value and percentage of completion to find the earned income. This total, earned income, represents a project-to-date total, not just the current month's total. It is assumed that the percentage of completion is already computed when this schedule is prepared. This percentage is multiplied by the total contract amount to find the earned income. The excess of

earned income over billings to date is the current (project to date) amount to accrue or defer.

The data on work accounted for under the completed-contract method is listed in summary form, as supported by the detail on Figure 2-4. The net result (in this example \$1,600.53 in income earned over amounts billed) is made up of:

- 1) Earned income (asset): \$4,804.64 (Percentage of completion)

Johnson Construction Company
Earned Income
As of March 31, 20__

Job Description	Total Contract	% of Completion	Earned Income Billings To Date		Earned Less Billing
Percentage of Completion					
Anderson	\$65,000.00	30%	\$19,500.00	\$19,500.00	\$ —
Carey	50,000.00	45%	22,500.00	24,000.00	(1,500.00)
Norwich	6,000.00	10%	600.00	415.36	184.64
Rayne	15,000.00	20%	3,000.00	2,880.00	120.00
Widmark	75,000.00	35%	26,250.00	29,090.00	(2,840.00)
Windsor	280,000.00	80%	224,000.00	219,500.00	4,500.00
Completed Contracts:					
Uncompleted contracts billed this month			—	3,964.11	(3,964.11)
100% completed contracts:					
Billed this month			10,373.93	10,373.93	—
Billed in prior months			5,100.00	—	5,100.00
Totals			\$311,323.93	\$309,723.40	\$1,600.53
Summary					
Percentage of Completion					
Earned income over amounts billed					\$4,804.64
Billings over amounts earned					(4,340.00)
Completed Contracts					
Deferred income					(3,964.11)
Reversal, prior months' deferrals					5,100.00
Total current month adjustments to income					\$1,600.53

Figure 2-5
Earned income summary

- 2) Deferred income (liability) \$5,100.00 (Completed contract — reversal of prior deferrals)
 <\$3,964.11> (Completed contract — current month's additional deferrals)
 <\$4,340.00> (Percentage of completion)

The percentage-of-completion project to date earned income — asset (\$4,804.64) and deferred income — liability (\$4,340.00) are increases to those accounts. Your accountant will make the additional entries to reverse completely the prior balances of the earned income asset account and the deferred income liability account.

It's also necessary to reverse the earned income account for completed contracts if there were prior balances. There are none in this example, just as there

are no cases of current month earned income on completed contracts.

As far as completed-contract accounting is concerned, the \$5,100.00 reversal of prior deferrals is a reversing entry, which in this example is the entire balance of that account.

We have seen how a number of asset, liability, and income accounts are used. But one of the problems with these accounts is that all the totals include sales tax. You shouldn't consider tax as part of income. Collected sales taxes are properly treated as a liability owed to the taxing agency. Since the intention here is to keep reports and worksheets as uncomplicated as possible, the question of sales tax hasn't been raised. You can break the tax out by recomputing the sales totals without tax. But in this example, the income

section of the general ledger includes an account to reverse sales taxes from income totals recorded.

Here is a summary of the asset, liability, and income accounts involved in sales accounting:

Asset Accounts

- Accrued earned income accounted for by the percentage-of-completion method
- Accrued earned income accounted for by the completed-contract method

Liability Accounts

- Deferred income accounted for by the percentage-of-completion method
- Deferred income accounted for by the completed-contract method
- Sales taxes payable

Income Accounts

- Gross income accounted for by the percentage-of-completion method
- Gross income accounted for by the completed-contract method
- Adjustment to gross income for sales taxes

Cash and Accrual Accounting

The percentage-of-completion and completed contract methods we've described here can both be maintained on the accrual system, and that's the basis for the descriptions you've just read. That means that income, costs and expenses are placed in the books when they're earned (income) or incurred (costs and expenses). So if someone buys from you but hasn't paid you yet, you accrue the account as a receivable and you accrue the income as earned income.

The accrual system is by far the most accurate, because it shows what's really happening in your operation in terms of profit and loss. You can't tell what's happening just by looking at what you've deposited in the bank and what you've paid from your checkbook. You need to look at two other important elements: What other people owe to you (accounts receivable) and what you owe other people (accounts payable). Most contractors, even those who don't look at financial statements regularly, know where they stand in general because they keep a mental tab on all aspects of their operation. The accounting system serves as a useful reminder and a summary — sometimes surprising the boss and at other times confirming what he already knows. In either event, the law

requires that you keep books and records, so you might as well have *accurate* books that also reveal useful information to you.

As an alternative to the accrual system, you can also keep your books on the *cash method*. Under this system, you only record something in your books and records when money actually changes hands. This method isn't useful for any kind of comparative analysis by job, because as you know, the cash transaction is the last step in a deal; and it could occur weeks, or even months after the work is actually done. The advantage to cash accounting is its simplicity. You basically construct a complete bookkeeping system out of your checkbook. Income consists of deposits, and costs and expenses are represented by the checks you write. While the cash method is attractively simple, it doesn't comply with most regulations for keeping books; neither does it provide you with the kinds of analysis you probably need to track jobs and customer accounts. It works best if your operation is on a cash basis, meaning you don't allow credit to customers and you usually get paid as work is done.

Some construction firms have discovered that the easiest way to keep their books is to operate on the cash basis, and have their accountant make accrual entries at the end of the month in order to prepare financial statements. This saves a lot of bookkeeping time during the month. It also reduces the level of skill required to keep your books.

The same rule can be applied to reporting on the percentage-of-completion method. As you've seen, this involves a complex array of deferrals and accruals on a regular basis, and also requires constant adjustment to the system. However, even if you're required to report on the percentage-of-completion method (or if you opt to use that system anyway), you don't have to maintain that on an on-going basis.

As an alternative, you can keep your books on a simple transaction basis. Accounts receivable can be controlled through its own subsidiary system, with no entries made into the books except cash. The same can be worked for accounts payable; they make it into the books only when a check is cut. Then your accountant makes month-end entries to reflect the true picture. This system is fine as long as it meets the rules for record keeping, and keeps your operation nice and easy to manage.

If you do this hybrid form of bookkeeping, be sure to work with your accountant in designing it. The accountant will need to be able to make month-end adjustments in accordance with the records you keep, so there has to be enough information in the records

for the entries to be figured out and made accurately. That's not difficult to build into your system, but it's much harder to create it by going back and revising everything later.

Surviving the Complexities

The problem with being required to keep books and records under one method or another is a complication resulting from an accounting requirement, and not from a contracting requirement. Every business owner needs to comply with the law.

Developing a system to accurately report these variations in timing for reporting income, costs, and expenses, doesn't have to take up too much time. In fact, it doesn't have to be done on an on-going basis. Your accountant can work with you to create an efficient, easily-managed system.

In other words, you don't have to decide whether to report or defer each and every transaction as it comes up. Here's how the system should be set up to work.

1. Record everything in the most *consistent* and straightforward way possible.
2. Enter every form of income, cost and expense into your system in the same way.
3. Code income and costs to the specific job.
4. Code expenses to their proper classification.

Then, when your accountant prepares your financial reports, the revenues and costs are adjusted only on the report (not in your books at this point) to reflect the proper percentage-of-completion treatment. This adjustment is determined by the length of time the job takes, the size of the job, and how that all fits into the current set of tax rules, including exceptions — decisions to be made by your accountant.

At the end of the year, a similar treatment of your income, costs and expenses is made to accurately

report those jobs that are subject to percentage-of-completion and those that are handled as completed contracts. Any completed jobs are fully reported at that point. Again, this is your accountant's task and not yours.

So you should enjoy the best of both worlds. Your bookkeeping chore is set up so that everything gets entered in the same way. Plus, you can get job cost reports and track your progress. With these, you can monitor your job forecast and budget and make reports to lenders concerning your job completion. However, you don't have to become involved in the deferral and accrual of partially-completed job-related income and costs.

Your accountant is provided with enough information to accurately report long-term contract completion, with documentation to support the decisions made about deferral and accrual under the percentage-of-completion method. Your accountant, who should be familiar with the current rules for this treatment, is responsible not only for accurately reporting these matters, but also for advising you about the tax consequences under the percentage-of-completion method. That way, you can perform on-going, year-round tax planning so there are no surprises — if you can call them that — around tax time.

Understanding how percentage-of-completion reporting takes place is important because, by knowing the theory, you can better take part in tax planning. However, you don't need to get mired down in the specifics of how income is accrued or deferred; you have more important things to do. Every business owner should be well versed in the theories that affect tax outcomes. At the same time, you don't want to wake up one morning to find that you're spending less time being a contractor and more time being your own accountant.

Test Questions:

1. Booking income is the process of:

- A. Making the journal entry in the books.
- B. Showing the income as income in the books.
- C. Writing down the amount of the check on your bank deposit slip.
- D. Transferring the income entry from the cash journal to the general ledger.

2. Under the percentage-of-completion method, income is booked:

- A. Only as it is received.
- B. Only when it is due and payable.
- C. Only as a percentage of the total bid, based on the percentage the job is completed as of that date.
- D. Only when the project is completed.

3. When percentage-of-completion income has been booked, any amounts received over that are:

- A. Returned to the payee as an overpayment.
- B. Kept on hand until they can be booked, preferably in a secured, locked area.
- C. Deposited and recorded as unearned income.
- D. Kept as additional, unrecorded profit.

4. When percentage-of-completion income is higher than the amount received, the underpayment is:

- A. Recorded as accrued income.
- B. Written off as a loss.
- C. Written off against miscellaneous expense.
- D. An unrecorded net loss.

5. Under the completed-contract method, income is booked:

- A. According to the schedule of payments agreed to at the time the contract starts.
- B. As cash payments are made.
- C. At the end of the job.
- D. When inspections of each completed phase have been completed and signed off.

6. The problem with completed-contract accounting is:

- A. The books don't necessarily reflect an accurate picture of how you're doing.
- B. All the income and profit shows up in the same year, even when some of it occurs over two or more years.
- C. The bookkeeping might require special records to keep track of receivables and payables.
- D. All of the above.

7. Earned income accounts are:

- A. Asset accounts.
- B. Liability accounts, even though they aren't really liabilities, but deferred income.
- C. Profit and loss accounts.
- D. None of the above.

8. Deferred income accounts are:

- A. Asset accounts.
- B. Liability accounts, even though they aren't really liabilities, but deferred income.
- C. Profit and loss accounts.
- D. None of the above.

-
9. **When earned income and deferred income entries are made in your books:**
- A. The entries are netted against each other.
 - B. Only the larger of the two entries is allowed under current rules.
 - C. The differences are billed to customers before the tenth of the following month.
 - D. Reversal entries are entered in the books for the previous month's earned and deferred totals.
-
10. **Percentage-of-completion and completed-contract method are both variations of:**
- A. Double-entry bookkeeping.
 - B. Accrual accounting.
 - C. Cash accounting.
 - D. Single-entry accounting.
-
11. **The cash method of accounting requires that entries be made:**
- A. When source documents are received.
 - B. When transactions are known and final.
 - C. When cash changes hands.
 - D. When bills get sent out.
-
12. **In accrual accounting, payments that are received but not yet earned are:**
- A. All profit.
 - B. Returned to the customer.
 - C. Accrued.
 - D. Unearned.
-
13. **The estimated total cost of a job is \$822,000. Total costs paid to date are \$295,900. The percentage-of-completion on this job is:**
- A. 2.7%.
 - B. 27%.
 - C. 3.6%.
 - D. 36%.
-
14. **When a part of each progress billing is held back, it's called:**
- A. Accrual.
 - B. Retainage.
 - C. Deferred income.
 - D. Backup withholding.
-
15. **The purpose of percentage-of-completion accounting is to:**
- A. Allow multiple jobs to be worked on at the same time.
 - B. Report income only as jobs are completed.
 - C. Report income progressively when periods exceed one tax year.
 - D. Simplify the bookkeeping and accounting task.

Cash and Charge Sales

Your books account for two kinds of sales: cash sales and charge sales. *Cash sales* are payments you receive for work or a product. They must be an actual payment and not a loan. They can be an advance payment and may be by check, credit card or currency. *Charge sales* are all sales you made on credit and for which you will issue monthly statements of charges.

Special control problems arise when customers pay in currency. You may be tempted to use this currency to pay your own bills, or even buy donuts. Don't do it. Paying bills out of sales receipts can cause serious problems. Always deposit all income in your bank account. Your bank deposits should exactly equal all cash taken in during the month. This is the best possible way to document your receipts. When some cash doesn't go into your deposits, your cash income record is distorted.

The bank's monthly statement provides an excellent summary of sales if you deposit all your receipts each month. Comparing these summaries from month to month lets you prepare good cash forecasts.

Many builders need a fairly large office cash fund. If that's the case in your company, you might be tempted to hold currency receipts in your office. It's better to set up a petty cash fund by writing a check to petty cash from your general fund instead. This procedure and its controls are discussed in Chapter 17.

■ Recording Earned Income

A sales journal is one of the forms in your "books of original entry." This record summarizes information from "source documents." In the case of sales, the source document will be either an invoice or a payment, depending on whether you're booking the accrual of earned income or the receipt of a cash payment.

A book of original entry gathers information during the month to simplify recording into the book of final entry, also known as the General Ledger. Whether your bookkeeping process is by hand or an automated system, it's important to understand the flow of information.

Every entry into your system is made by a journal. This establishes the flow of information and makes all entries uniform, so they're easier to track and easier to find later. Journals take several forms. A journal can be a simple two-line entry to correct an error, record a non-cash transaction, or reverse an accrual from the previous month. A journal can also be a detailed record of all transactions of a particular kind for an entire month.

A good example is the income journal. This summarizes multiple income transactions during the month. By making a series of debit and credit entries (done in all types of journals), you account for the sales transactions so a month-end entry can be made to the general ledger. Debits and credits must always equal one another. This is the central rule of double-entry bookkeeping.

Receipts are posted in one of two ways. If you're keeping your books on the accrual system (income goes in the books when earned), the debit is made to the asset account called Accounts Receivable and the credit is made to Income. Later, when your customer makes a payment, the debit goes to Cash and the credit goes to Accounts Receivable. Your entries should look like this:

	Debit	Credit
To record earnings:		
Accounts Receivable		xxx
Income		xxx

To record cash receipts:

Cash	xxx	
Accounts Receivable		xxx

If you're reporting under the cash method, you only make entries when cash changes hands. In this case, you always debit Cash and credit Income for a sale, because under the cash method, you don't use Accounts Receivable. You might need to keep track of accounts receivable from your customers, but that's done outside the books in the cash method. You don't need to set up any accruals, either. The sales entry under the cash method looks like this:

	Debit	Credit
To record income:		
Cash	xxx	
Income		xxx

The cash method is fine for a small-time operation with a few customers and very few transactions. However, as your company grows, you'll need to switch to the accrual method. In most operations, you'll be required to report under the accrual method for tax reasons. So the simplicity of the cash method doesn't make sense in a growing operation.

■ Recording Cash Sales

List your cash sales by date so you can create summaries for general ledger entries, fill out sales tax forms and make up other needed reports. The procedure should be simple, to minimize your workload. Figure 3-1 shows a cash sales journal. It breaks out taxable sales and sales tax. In this example, the taxable sales are subject to a 6 percent tax. This tax is collected by businesses and paid to the state's taxing agency at the end of each month or quarter. Therefore, the tax you collect is a liability and not a sale. So list the tax in its own column. The tax total is entered in a different section of the general ledger from the sales (income) figures.

There is no tax on sales to other businesses that will resell to consumers. Neither are labor charges taxable. When listed as they are in Figure 3-1, totals for taxable sales, sales tax, labor, and resale are readily available in both total and detail. Notice that the last day of each week is underlined. This is done to separate the periods for bank statement reconciliation.

Bank deposits in this example are made every Monday and at the end of each month. This way, the total receipts are equal to the total bank deposits.

Bank deposits are summarized at the bottom of Figure 3-1. This verifies that the total receipts were deposited this month. While this exact procedure isn't appropriate for every builder, it's a good example of a controlled, simple method that serves two purposes. It accounts for sales and verifies deposits against receipts. An additional advantage is the arithmetic control. The detail column should add across to the right total and down to the bottom total. All worksheets should have similar controls. It doesn't take long to do this and it can save hours when you're trying to find a mistake.

Cash Sales Journal
March, 20_____

Date	Description	Invoice Number	Taxable Sales	Sales Tax	Labor	Resale	Total
3- 1	J. Smith, Builder	301				\$200.00	\$200.00
3- 2	M. Brown	303	\$35.00	\$2.10	\$21.00		58.10
3- 3	J. Woods	304	180.00	10.80	105.00		295.80
3- 4	L. Carlson	309	92.50	5.55	75.00		173.05
3- 5	B. Ottman	310	37.11	2.23	130.00		169.34
3- 8	L. Jones	316	50.00	3.00	21.00		74.00
3- 8	J. Smith, Builder	317				150.00	150.00
3-11	C. Carlson	319	34.80	2.09	21.00		57.89
3-12	J. Smith, Builder	324				175.00	175.00
3-17	D. Thomas	327	32.16	1.93	42.00		76.09
3-19	C. Carlson	328	173.00	10.38	400.00		583.38
3-22	K. Middleton	329	42.80	2.57	100.00		145.37
3-22	Woodman Pool Service	332				425.00	425.00
3-23	L. Peterson	336	35.00	2.10	150.00		187.10
3-23	Midfield School	338	37.90	2.27	42.00		82.17
3-26	D. Thomas	342	280.00	16.80	300.00		596.80
3-26	M. Brown	343	301.90	18.11	104.00		424.01
3-30	D. Thomas	345	11.50	.69	21.00		33.19
3-31	L. Peterson	348	132.50	7.95	150.00		290.45
Total			\$1,476.17	\$88.57	\$1,682.00	\$950.00	\$4,196.74

Summary of Bank Deposits:

Date	Amount
3- 8	\$ 896.29
3-15	456.89
3-22	659.47
3-29	1,860.45
4- 1	323.64
Total	\$4,196.74

Figure 3-1
Cash sales journal

Recording Charge Sales

Wouldn't it be nice to be paid in full all the time, as shown in Figure 3-1? Unfortunately, very few businesses can operate without granting credit to their customers. Figure 3-1 is only an example of what a sales journal could look like. But it's unlikely that your business runs on a strictly cash basis. If you do any work on credit, you have to use an accounting method that records both cash and charge sales.

In the following example, Johnson Construction has between 20 and 30 charges per month, and about 20 cash sales. Figures 3-2 and 3-3, the combined sales

journal and charge sales journal, are merely invoice listings. That's all any sales journal is. A manual (hand-prepared) system like these would be adequate for a builder with a sales volume like this.

The combined sales journal (Figure 3-2) has the same information as the cash sales journal and includes weekly sales in summary from the charge sales journal. The detail of these is maintained separately in the charge sales journal, Figure 3-3.

Keep the charges separate as shown so you can use a worksheet or pegboard method for billing. Even if you change methods sometime in the future, you

Combined Sales Journal March, 20____													
Date	Description	Invoice	Taxable Sales	Sales Tax	Labor	Resale	Rentals	Hauling	Freight Charges	Finance Charges	Total Sales	Cash Receipts	Discounts Allowed
3/1	J. Smith, Bldr.	301				200.00					200.00	200.00	
3/2	M. Brown	303	35.00	2.10	21.00						58.10	58.10	
3/3	J. Woods	304	180.00	10.80	105.00						295.80	295.80	
3/4	L. Carlson	309	92.50	5.55	75.00						173.05	173.05	
3/5	B. Ottman	310	37.11	2.23	130.00						169.34	169.34	
3/8	Charges		5,630.00	337.80	1,890.00	1,600.00		60.00		7.50	9,525.30	6,943.00	42.00
3/8	L. Jones	316	50.00	3.00	21.00						74.00	74.00	
3/8	J. Smith, Bldr.	317				150.00					150.00	150.00	
3/11	C. Carlson	319	34.80	2.09	21.00						57.89	57.89	
3/12	J. Smith, Bldr.	324				175.00					175.00	175.00	
3/15	Charges		4,012.60	240.76	1,995.00	900.00				3.00	7,151.36	3,794.56	
3/17	D. Thomas	327	32.16	1.93	42.00						76.09	76.09	
3/19	C. Carlson	328	173.00	10.38	400.00						583.38	583.38	
3/22	Charges		—	—	—	—	180.00		5.00		185.00	3,400.00	
3/22	K. Middleton	329	42.80	2.57	100.00						145.37	145.37	
3/22	Woodman	332				425.00					425.00	425.00	
3/23	L. Peterson	336	35.00	2.10	150.00						187.10	187.10	
3/23	Midfield School	338	37.90	2.27	42.00						82.17	82.17	
3/26	D. Thomas	342	280.00	16.80	300.00						596.80	596.80	
3/26	M. Brown	343	301.90	18.11	104.00						424.01	424.01	
3/29	Charges		3,775.00	226.50	2,100.00	360.00		120.00			6,581.50	5,985.66	8.00
3/30	D. Thomas	345	11.50	0.69	21.00						33.19	33.19	
3/31	Charges		300.00	18.00	—	—		200.00			518.00	3,200.00	
3/31	L. Peterson	348	132.50	7.95	150.00						290.45	290.45	
											23,961.16 (1)	23,323.22	
											4,196.74 (2)	4,196.74	
Total			15,193.77	911.63	7,667.00	3,810.00	180.00	380.00	5.00	10.50	28,157.90	27,519.96	50.00
(1) Charge Sales											Summary of Bank Deposits:		
(2) Cash Sales											3/8	7,839.29	
											3/15	4,251.45	
											3/17	4,059.47	
											3/29	7,846.11	
											4/1	3,523.64	
											Total	<u>27,519.96</u>	

Figure 3-2
Combined sales journal

Charge Sales Journal
March, 20 _____

Date	Description	Invoice	Taxable Sales	Sales Tax	Labor	Resale	Rentals	Hauling	Freight Charges	Finance Charges	Total Charge Sales	Received On Account	Discounts Allowed
3-1	Riley Landscape	302	1,480.00	88.80							1,568.80		
1	Mitchell & Sons	305								7.50	7.50		
1	J. Carey	306	2,400.00	144.00	1,554.00						4,098.00		
1	Riley Landscape	Paid										2,058.00	42.00
2	J. Carey	Paid										2,328.00	
2	LBN Brothers	Paid										245.00	
3	LBN Brothers	307						60.00			60.00		
3	Void	308											
4	Harvey Contracting	Paid										1,412.00	
5	Black's Landscape	Paid										900.00	
5	Harvey Contracting	311	1,150.00	69.00	336.00						1,555.00		
5	Riley Landscape	312	600.00	36.00							636.00		
5	Black's Landscape	313				1,600.00					1,600.00		
	Total Week		5,630.00	337.80	1,890.00	1,600.00	0.00	60.00	0.00	7.50	9,525.30	6,943.00	42.00
3-8	Riley Landscape	314	200.00	12.00							212.00		
8	B. Anderson	315	1,900.00	114.00	1,785.00						3,799.00		
9	B. Anderson	Paid										2,815.00	
9	Riley Landscape	318	400.00	24.00							424.00		
11	N. Norwich	320	312.60	18.76	84.00						415.36		
11	N. Norwich	Paid										159.66	
12	Walter's Plastering	321				900.00				3.00	903.00		
12	Void	322											
12	L. Widmark	Paid										819.90	
12	L. Widmark	323	1,200.00	72.00	126.00						1,398.00		
	Total Week		4,012.60	240.76	1,995.00	900.00	0.00	0.00	0.00	3.00	7,151.36	3,794.56	0.00
3-15	Void	324											
15	Harvey Contracting	325					135.00		5.00		140.00		
15	Hiram & Hiram	Paid										3,400.00	
17	J & J Paints	326					45.00				45.00		
	Total Week		0.00	0.00	0.00	0.00	180.00	0.00	5.00	0.00	185.00	3,400.00	0.00
3-22	Triumph Construction	Paid										3,000.00	
22	C. Rayne	330	600.00	36.00	84.00						720.00		
22	LBN Brothers	331						55.00			55.00		
22	C. Rayne	Paid										1,619.66	
23	Void	333											
23	G. Windsor	334	1,375.00	82.50	1,932.00						3,389.50		
23	G. Windsor	Paid										974.00	
23	Riley Landscape	335	1,000.00	60.00							1,060.00		
23	LBN Brothers	337						40.00			40.00		
24	Regal Apartments	339	800.00	48.00	84.00						932.00		
25	Jim's Contracting	Paid										392.00	8.00
25	Jim's Contracting	340				360.00					360.00		
25	Void	341											
26	Hauser & Sons	344						25.00			25.00		
	Total Week		3,775.00	226.50	2,100.00	360.00	0.00	120.00	0.00	0.00	6,581.50	5,985.66	8.00
3-29	Karston Landscape	Paid										3,200.00	
29	Regal Apartments	346	300.00	18.00							318.00		
30	LBN Brothers	347						200.00			200.00		
	Total Week		300.00	18.00	0.00	0.00	0.00	200.00	0.00	0.00	518.00	3,200.00	0.00
	Total Month		13,717.60	823.06	5,985.00	2,860.00	180.00	380.00	5.00	10.50	23,961.16	23,323.22	50.00

Figure 3-3
Charge sales journal

wouldn't need to change the whole procedure. You can tailor the journals to meet your business requirements.

Cash sales are, naturally, collected at the time of the sale. But for charge sales, additional controls are needed to account for payments. Figure 3-2 is similar to Figure 3-1 but includes an additional section for payments on account. Columns have also been added for rentals, hauling, freight, finance charges, and discounts allowed. These represent a broad range of possible types of income for one builder or contractor. Not every builder will require every category. But some of the categories will apply to every building operation.

Finance charges are amounts added to overdue balances. In this example, one-half of 1 percent per month has been used as a finance charge: Past due balance times 0.005 equals the finance charge. Discounts are often given on trade accounts. Allow

and complete trade discounts selectively. Most builders allow a 2 percent discount to certain types of trade accounts only, rarely to all customers.

The deposit listing has been omitted from Figure 3-3 because a summary of charge sales deposits would seldom be a complete record of company sales. Figure 3-2 includes a summary of bank deposits because it is the one record that contains all income and payments on account. Note that all cash sales are listed both in the total column and in the cash receipts column. This last column, cash receipts, includes all cash sales and any payments on credit accounts.

Figure 3-4 is the duplicate deposit slip which documents your cash receipts and the deposit total. Each item is listed by customer to back up the entry you record in that customer's accounts receivable file. This type of dual recording isn't time-consuming, is easy to store, and can even replace the summary of bank deposits on the combined sales journal.

Johnson Construction Company Duplicate Deposit Slip	
Deposit Slip	
List checks by bank number	
Currency	131.00
Coin	.89
Checks:	
90-123	150.00
3-51	175.00
1-876	2,815.00
90-234	159.66
8-42	819.90
Total Deposit	4,251.45

☐ L. Jones \$74.00 and C. Carlson \$57.89

 J. Smith, Builder
 I. Smith, Builder
 B. Anderson
 N. Norwich
 L. Widmark

Deposit Date: _____

Figure 3-4
Duplicate deposit slip

Many banks will supply you with a deposit book that's set up to handle this kind of record. Fill out the deposit slip and either photocopy it or write the amounts into the record book to create a duplicate for your file. Then write the customer information beside the amounts.

The builder in the example has six contracts in progress. He accounts for all of these under the percentage-of-completion method. He keeps a file of correspondence, contracts, amendments, invoice copies, and other papers for each job. Summaries of payments and charges are kept too, as we'll explain later.

Figure 3-5 is a summary of billings for one month, including the degree of completion for each job. This kind of report lets a builder see at a glance his monthly billings. It's also valuable for comparing the accounts billed for several months. And it's useful in timing the purchase of bulk materials to be used on several jobs.

In Figure 3-5 the major jobs are listed by the amounts billed. "All other" summarizes billings on jobs accounted for by the completed-contract method. This summary provides the same value for comparative purposes and cash budgeting. The illustration is by no means a complete record for job analysis. It

doesn't show earned income, only billings. Its usefulness is limited to cash planning and comparing monthly billings. By-the-job accounting is discussed in Chapters 6 and 27.

Accounts Receivable

The most annoying bookkeeping task for most builders is controlling their customer credit accounts. Both a sales journal and monthly billings are required for each account. A good accounts receivable system includes customer account cards which are balanced each month with the general ledger entry for the whole account. Balanced entries, backup systems, and monthly statements can all be handled in a single operation. This saves time and improves the quality of your work. The real value of a good receivables method is in the variety of information it provides — information to bill customers, control collections, make general ledger entries, and build historical files. You could have all of these features through exhaustive duplicated effort. You can also have a simple system that meets all these requirements by designing a procedure that

Income by Job March, 20__								
Date	Total	Anderson	Carey	Norwich	Rayne	Widmark	Windsor	All Others
3- 1 to 3- 5	\$10,421.59		\$4,098.00					\$6,323.59
3- 8 to 3-12	7,608.25	3,799.00		415.36		1,398.00		1,995.89
3-15 to 3-19	844.47							844.47
3-22 to 3-26	8,441.95				720.00		3,389.50	4,332.45
3-29 to 3-31	841.64							841.64
Total by job	\$28,157.90	\$3,799.00	\$4,098.00	\$415.36	\$720.00	\$1,398.00	\$3,389.50	\$14,338.04
% Complete		30%	45%	10%	20%	35%	80%	

Figure 3-5
Income by job

Johnson Construction Company
412 Ward Avenue Suite 3B
Midfield, CA 01020 ph. 555-9898

Bill To:
Riley Landscape
P.O. Box 8700
Midfield, CA 01021

Ship To:
Riley Landscape
600 Tenth Avenue
Midfield, CA 01020

Qty.	Description	Price	Total
4	Storage Shed Kits	370.00	1,480.00
	Tax		88.80
	Total		1,568.80

Invoice # 302
Date 3-1
Terms 2% - 10th
P.O. # --

Total 600.00
36.00
636.00

Total 200.00
12.00
212.00

Johnson Construction Company
412 Ward Avenue Suite 3B
Midfield, CA 01020 ph. 555-9898

Statement

Riley Landscape
600 Tenth Avenue
Midfield, CA

Date	Description	Charges	Credits	Balance
	Balance Forward			2,100.00
3-1	302	1,568.80		
3-1	paid		2,058.00	
3-1	discount		42.00	
3-5	312	636.00		
3-8	314	212.00		
3-9	318	424.00		
3-23	335	1,060.00		3,900.80

Figure 3-6
Invoices and statement

fits your needs exactly. Any builder who thinks about it should want only the latter.

Figure 3-6 shows manually-prepared invoices and a billing statement. Invoices should show enough detail so your customer can identify the material and services and pay according to your terms. For example, invoice 302 (indicating third month, second invoice issued) contains the information that payment is expected by the tenth, and a 2 percent discount will be allowed if that payment date is met. The charge is clearly identified by its description and includes the unit price.

The statement is a summary of a customer's account, including the balance forward, current invoices, payments on account, and the new balance due. In the example on the right side of Figure 3-6, Riley Landscape paid on the first of March and took a \$42.00 (2 percent) discount.

Charge customers often accumulate balances over a period of more than one month. One very effective way to keep track of amounts due is to maintain a file of ledger sheets or cards, one for each customer. The

cards should duplicate information on the invoices (as summarized on monthly statements) and provide a summary of each account's history. Figure 3-7 is an example of a customer account card.

Customer account cards should include the name, address, telephone, and discount terms, if any. A file of cards like this is a control system for accounts receivable. At the front of the file should be a card labeled *Control*. The control card might look like Figure 3-8. The charges and credits columns are posted from the sales journal. The control card shows each month's charges, credits, and balance. You should be able to add up the ending balances of all cards in the accounts receivable file and come up with this summary balance. If the control card total is correct, it will match the total of all charges, credits and the balance of individual customer cards.

If the total of all customer cards doesn't agree with the control card total, it means there's a mistake on one or more of the customer cards or in the sales journal. This means that you're sending out some monthly statements that don't add up correctly. Find and correct all errors before you prepare the billing

Account of:

Riley Landscape
600 Tenth Avenue
Midfield, CA

Phone: 678-1111

Discount: 2% - 10th

Date	Description	Charges	Credits	Balance
	Balance Forward			1,400.00
2-24	241	700.00		2,100.00
3-1	302	1,568.80		
3-1	paid		2,058.00	
3-1	discount		42.00	
3-5	312	636.00		
3-8	314	212.00		
3-9	318	424.00		
3-23	335	1,060.00		3,900.80

Figure 3-7
Customer account card

Control			
	Charges	Credits	Balance
Balance Forward			26,933.10
Month of January, 20__	24,105.90		
		22,459.38	28,579.62
Month of February, 20__	24,610.40		
		24,766.80	28,423.22
Month of March, 20__	23,961.16		
		23,323.22	29,061.16
Month of April, 20__			
Month of May, 20__			
Month of June, 20__			
Month of July, 20__			
Month of August, 20__			
Month of September, 20__			
Month of October, 20__			
Month of November, 20__			
Month of December, 20__			

Figure 3-8
Control card

statements. Don't let your customers lose confidence in your statements.

Problems can occur in every system. But an automated bookkeeping procedure helps identify and locate errors efficiently. Posting errors are minimized in a comprehensive system because all necessary records are posted from a single controlled entry.

Automation won't substitute for a basic understanding of your accounting system, and it won't solve all problems related to accuracy. But it will save time. Bookkeeping and accounting software is so inexpensive today that automating your system is hardly a tough decision. If you handle more than 10 or 20 transactions a month, make a trip to the computer store and check it out.

Tracking Receivables

From the customer ledger cards you can determine which accounts are past due. While you may already know where the problems are, this will help

you look at the whole picture. Doing this can give you an early warning of problems to come. Are your overdue accounts beginning to represent a larger part of your total receivables? The answer can be very important to you, especially in planning your future cash flow. Your aim is to maximize your available cash and minimize collection problems.

Analyze your receivables carefully. But remember that under the terms of most construction contracts, you consent to the withholding of retainage. Exclude retainages from the analysis of which accounts are past due. Retainage can't be considered past due even though your billings go back several months.

If retainages or similar withheld amounts become a major part of your receivables, set up a separate receivable account file for retainage in your general ledger. You might then maintain customer ledger cards for retainage just as you do for current accounts receivable. Just as with accounts receivable, maintain a control card in front of the file. You have to keep

Aging of Accounts Receivable				
March 31, 20____				
Name - Account	Current	31 - 60 days	Over 60	Total
Anderson, B.	3,799.00			3,799.00
Black's Landscape	1,600.00			1,600.00
Carey J.	4,098.00			4,098.00
Harvey Contr.	1,695.00			1,695.00
Hauser & Sons	25.00			25.00
Jim's Contr.	360.00			360.00
J & J Paints	45.00			45.00
LBN Brothers	355.00			355.00
Mitchell & Sons	7.50	1,500.00		1,507.50
Norwich, N.	415.36			415.36
Rayne, C	720.00			720.00
Regal Apartments	1,250.00			1,250.00
Riley Landscape	3,900.80			3,900.80
Triumph Const.			3,000.00	3,000.00
Walton's Plast.	903.00	600.00		1,503.00
Widmark, L.	1,398.00			1,398.00
Windsor, G.	3,389.50			3,389.50
Total	23,961.16	2,100.00	3,000.00	29,061.16

Figure 3-9
Aging list

good track of retainage to make complete cash forecasts. This means you must know when the cash will be available. You can estimate the date you'll collect retainage by estimating when the job will be complete and accepted by the customer.

Control the collection of accounts receivable with an *aging list* as in Figure 3-9. Builders who are in close contact with their customers may know quite well who owes them money. But an aging list can still provide needed information and a written record of slow-paying accounts.

An aging list indicates what percentage of total receivables (excluding retainages) is current and what percentage is past due. Compare aging lists for several months to see any change in the status of your receivables. This monthly search for emerging problems allows you to tighten up control of collections before the problem gets out of hand.

Refer to Figure 3-9. Triumph Construction has a balance more than two months old. However, no finance charges are being added. This could be the result of a special arrangement, or just a trade cour-

tesy. Sometimes businesses who have had relationships over several years will waive the normal finance charges, especially by mutual agreement. With a few exceptions, all accounts in the example are current (less than 30 days). This might not be totally realistic. Most builders have a few late-pay or problem accounts.

Because the number of monthly billings shown in Figure 3-9 is small, it isn't hard to analyze. The past due accounts are few and can be individually evaluated. But builders with a higher monthly volume should actively screen their accounts and analyze them on a regular basis. Because there are only a few accounts, it's fast and easy to type monthly statements for each customer. Detail records can then be maintained either directly from the invoices or from the sales journal. Under this system, each entry is made three times — on statements, on account cards, and in the sales journal. While this isn't a time-consuming chore, its weakness is the duplication of effort. The more times you record the same numbers, the more chance there is for error.

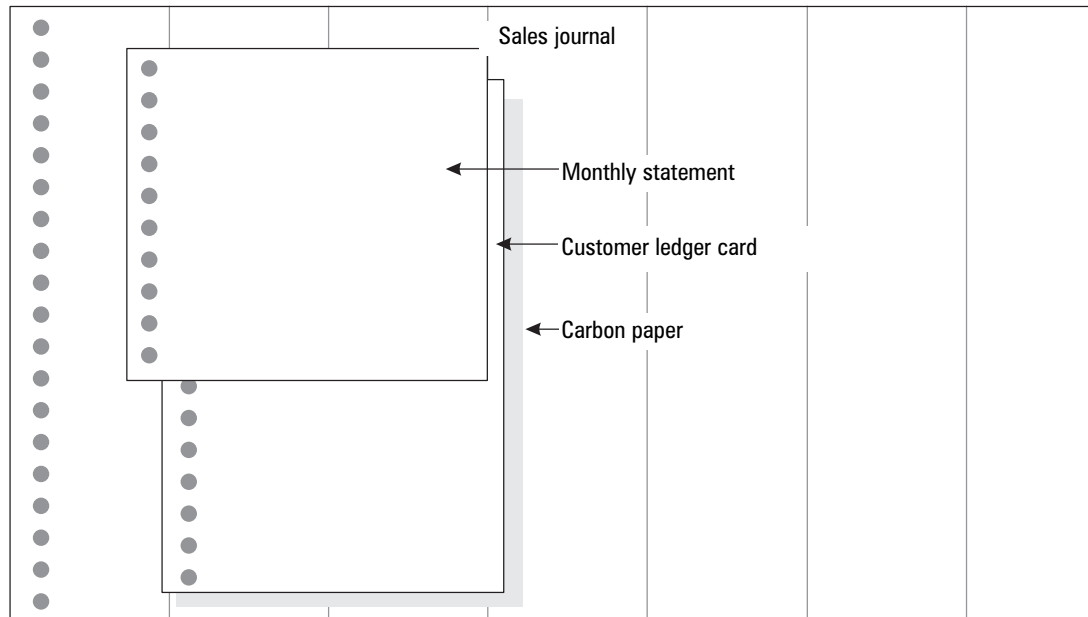


Figure 3-10
Sales journal in a pegboard system

Consider System Alternatives

Which system is the most practical for recording sales depends on:

- how heavy your transaction volume is
- whether or not you allow credit to your customers
- the type of transactions you have
- your personal preferences.

Transaction volume is the most obvious starting point. If you only have a few transactions per month, a simple hand-operated system will work. For moderate volume, some business owners like the *pegboard system*, although access to computers has made this system somewhat out of date. Many people aren't ready to invest in accounting software, and some still aren't ready for a computer. So the pegboard system is a useful interim system. The pegboard lets you combine all three entries into one step. With carbon or chemically-treated paper, data is transferred to all three records simultaneously. The records (sheets) are placed one over the other and line up on a series of uniform holes, which fit onto the pegs of the pegboard.

This pegboard method is illustrated in Figure 3-10. The bottom sheet, a blank form, is the sales journal. You custom design it with your headings, etc. For example, as jobs change, you can divide your sales

journal to reflect the specific job or type of work. Use the chemically-treated ledger card that doesn't require carbons, or lay a sheet of carbon paper over the sales journal and put the customer ledger card, which is also the monthly statement, on top. The ledger consists of an original to be mailed to the customer with each invoice generated during the month, and a duplicate for your files.

The value of the pegboard system is generated from saved effort and more control. Entries are made on statements, the customer ledger card, and the sales journal all at once. The disadvantages of this system are its awkwardness, the fact that mistakes affect all three records, and that the forms are expensive (if you can even find them). Few people use pegboards any more, so there's little demand. When this book was written, the following suppliers carried pegboard products:

Form-Masters, Inc.
800-395-3676
<http://www.formmasters.com>

A Business Forms
800-783-3255
<http://www.abusinessforms.com/main.htm>

Royal Business Forms & Specialties
800-489-4363
<http://www.searchus.com/rbf>

If your volume is high enough to consider a pegboard system, you might check into a basic computerized accounting system. It'll be faster, easier to use, and over time, probably less expensive.

The second consideration in choosing a system to record sales is whether or not you allow credit to your customers. There's a distinction between recognition of income and allowing credit. For example, when working on a building project in which payments come from a lender based on a percentage-of-completion schedule, that's not the same as allowing credit to a range of customers. Many builders don't allow credit, and expect to be paid when the work is contracted.

The third consideration is your type of transactions. If you're a builder who routinely gets paid in large, scheduled chunks, you probably don't need to provide credit accounting. But you'll still need to track your schedule and work with the lender or the customer to get your scheduled payments, even if you don't need to set up a credit tracking system. However, if you do a large volume of small jobs, like renovation or home plumbing services, you're probably accustomed to billing customers and getting paid at the end of the month. In this situation, you'll outgrow a manual accounting or pegboard system pretty quickly. Start thinking about computers.

Finally, what are your personal preferences? If you plan to expand, automation plays a crucial role in allowing you to control a high level of transactions, get billings out on time, and stay in control. If you're busy on the job, you can't afford to drown yourself in bookkeeping. Systems like the pegboard were popular back when computers were expensive and software hard to learn. Today, bookkeeping software is inexpensive and easy to learn. If you price pegboard systems and supply costs for a year, you'll find that any growth in volume will make the investment in a computer modest by comparison.

Verify Your Figures

As in the combined sales journal, you should be able to add all charge columns you assign and come up with the total of the charges. All credit columns you assign (probably only cash and discounts) must total the credits column. Verify the math on all statements by adding the figures in the previous balance column. At the bottom of each page, add the totals of the charges, credits, balance, and previous balance.

Check the math accuracy on individual statements by applying the following formula:

$$\text{Previous balance} + \text{charges} - \text{credits} = \text{current balance}$$

If you check the balances with this formula you can be confident that your statements are correct.

Figure 3-11 shows a typical sales journal form. Most brands of forms designed for pegboard use, specifically for sales, have these headings filled in.

You may want to have your accountant make a monthly general ledger entry for sales, information from your combined sales journal. But since the general ledger in this example breaks down sales by the percentage-of-completion and those computed by the completed-contract accounting methods, you'd have to take the totals from the earned income computation worksheets discussed in Chapter 2.

Figure 3-12 is a series of entries that the accountant for Johnson Construction Company would make at the end of March. No adjustments have been made for previous balances of earned income and deferred income (under the percentage-of-completion accounting method) on the assumption that the previous balances of those accounts were both zero. This form summarizes the company's entire sales for one month, including the change in accounts receivable, cash receipts, sales tax liability, earned income, accrued and deferred income, and adjustments.

Together, your bookkeeping records and a flexible general ledger provide a good trail for audit verification and detailed historical information. But you can keep records that show the details of your sales and any adjustments in a few easily-prepared worksheets.

Figure 3-13 summarizes the flow of information on bookkeeping records related to sales and accounts receivable for the entire month. Note that the largest volume of paperwork occurs at the beginning in the flow of information. For example, you're likely to have more billing invoices than statements. That's because each customer's invoices will be combined on a single monthly statement. As the information flows through the system, it becomes more and more summarized. By the time you post final entries in the general ledger, they represent a summary of a large number of detailed transactions.

This is a critical point. There may be a high volume of detailed entries documented on billing invoices, checks, and represented by receipts and vouchers — too high to manage efficiently. Recording information in the books achieves two things. First, it organizes and documents income and expenses. Second, by summarizing them in uniform journals, it makes the large volume of transactions manageable.

Sales Journal						
Date	Description	Charges	Credits	Balance	Previous Balance	

Total of previous balance + charges – credits = balance

Figure 3-11
Control features in pegboard sales journal

	Debits	Credits
Cash	\$27,519.96	
Accounts receivable	23,961.16	\$23,323.22
Gross income accounted for by the percentage-of-completion method		13,819.86
Gross income accounted for by the completed-contract method		14,338.04
Adjustment entries:		
Accrued earned income accounted for by the percentage-of-completion method	4,804.64	
Deferred income accounted for by the percentage-of-completion method		4,340.00
Deferred income accounted for by the completed-contract method	5,100.00	3,964.11
Gross income accounted for by the percentage-of-completion method		464.64
Gross income accounted for by the completed-contract method		1,135.89
Adjustment to gross income for sales tax included	911.63	
Sales taxes payable		911.63

Figure 3-12
Accounting entries for sales

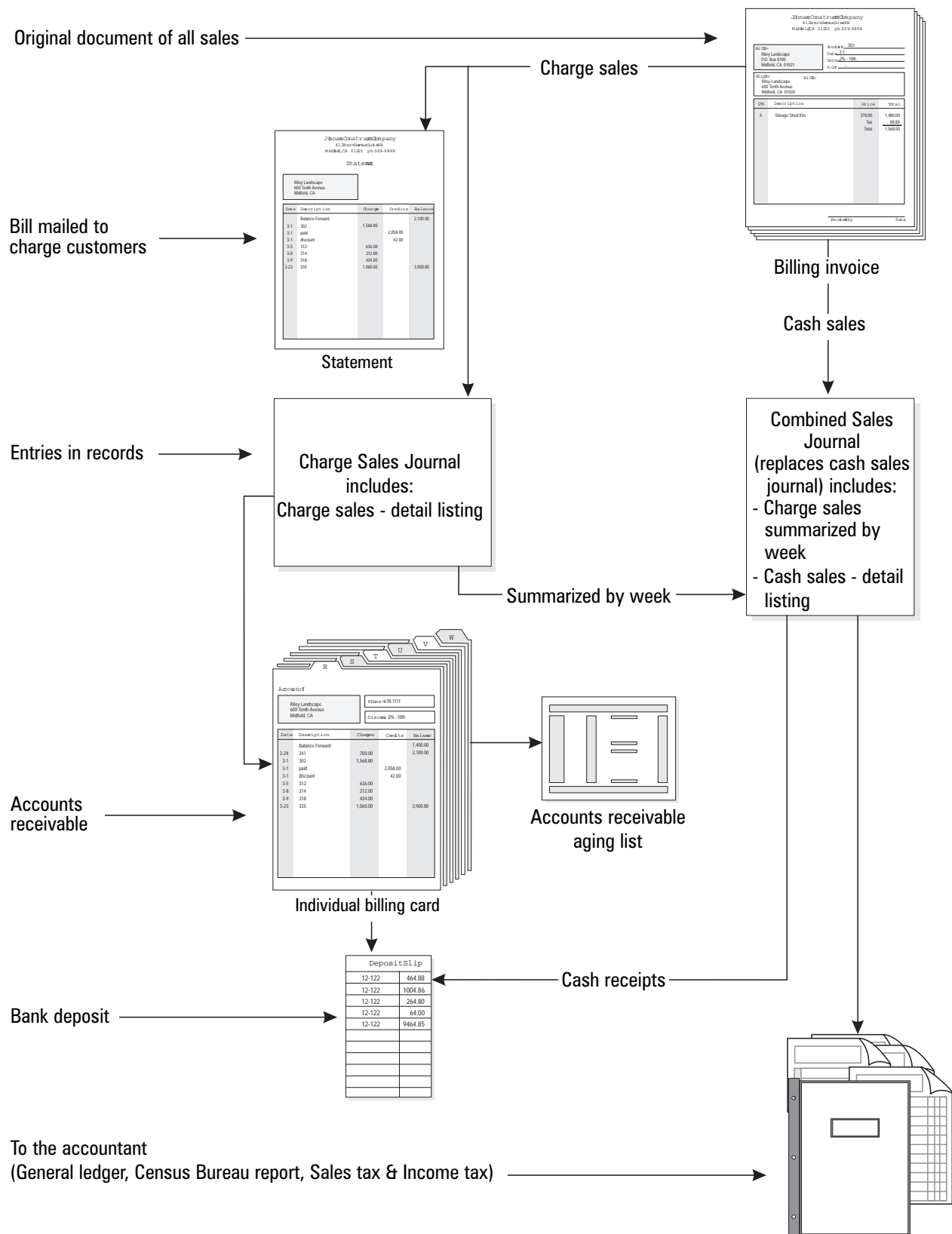


Figure 3-13
Flow of bookkeeping information

Test Questions:

1. The monthly bank statement is a useful instrument for verification of sales, because:

- A. It provides a written record of all money going into your account.
- B. The total of deposits can be reconciled to the total of reported sales in your books.
- C. The bank's record provides an independent verification of your books.
- D. All of the above.

2. The sales journal is used for:

- A. Recording sales and transactions in accounts receivable.
- B. Recording sales and accounts payable.
- C. Recording sales of equipment, machinery, and other business assets.
- D. Recording sales and expenses.

3. The sales journal might include more than just sales because:

- A. You might want to include marketing expenses.
- B. You also include all payments, so that you can keep track of your bank balance.
- C. It is used to record both cash and charge sales, as well as payments on account from previous periods.
- D. All of the above.

4. Accounts receivable record keeping is time-consuming because:

- A. You need accounts for each customer, as well as recording and balancing in the general ledger.
- B. People tend to abuse contractors who allow them to charge.
- C. You are required to file so many government compliance forms related to receivables.
- D. It never balances the first time through.

5. You need to prepare an aging list of receivables so that you will know:

- A. How long it's taking to collect money owed to you.
- B. How many hours per month you spend recording transactions on account.
- C. Which accounts receivable are *less* than 30 days old.
- D. Whether or not your ledger is in balance.

6. A pegboard system is used to:

- A. Record job scheduling problems on a large board in your shop.
- B. Record transactions only once even when you need to keep a number of records.
- C. Hold together the pages of a ledger that is worn by age.
- D. None of the above.

7. When payments on account are received, an entry is made to:

- A. Increase accounts receivable and reduce sales.
- B. Increase sales and reduce accounts receivable.
- C. Increase cash and reduce sales.
- D. Increase cash and reduce accounts receivable.

8. When sales made on account are recorded, the entry is to:

- A. Increase sales and increase accounts receivable.
- B. Increase sales and reduce accounts receivable.
- C. Increase sales and reduce cash.
- D. Increase accounts receivable and reduce cash.

9. Individual billing cards are important because:

- A. Without them, people won't pay you.
- B. You need to keep track of each customer's charges and payments.
- C. You need them to balance your accounts receivable subsidiary ledger.
- D. They are part of the general ledger you are required by law to maintain.

10. If you have too many transactions in your manual system, your alternative is to:

- A. Curtail the number of transactions you will allow on credit.
- B. Automate your accounts receivable process.
- C. Hire more people to help you.
- D. Reduce some of the record keeping because it takes too much time.

11. Cash sales are best handled by:

- A. Lumping them together as "miscellaneous" at month-end.
- B. Recording them in a Cash Sales Journal.
- C. Treating them in the same manner as charges.
- D. Making deposits to your personal account until the money is needed.

12. Past-due accounts should be handled in the following manner:

- A. Take legal action immediately to show you mean business.
- B. Write them off after 30 days.
- C. Control further charges until the account is up to date.
- D. File a lien after five business days.

13. An accounts receivable aging list is important because it shows:

- A. How much money you owe on accounts.
- B. The range of days of past-due accounts.
- C. How quickly you pay your bills.
- D. How efficiently your bookkeeping system works.

14. In tracking accounts receivable, retainage is treated by:

- A. Adding it back in as though paid.
- B. Excluding it from the past-due list, since it's not past due.
- C. Sending a past due notice to the customer.
- D. Distributing it evenly among outstanding accounts.

15. Automating your accounts receivable system makes sense when:

- A. All of your competitors get computers.
- B. You find an affordable program.
- C. You don't understand how the transactions are recorded.
- D. Your volume is high enough to justify it.

Managing Receivables

In the last chapter we talked about procedures for recording receivables. A good record of receivables is essential. Your receivables records should show the payment record of your clients *and* provide important information for your business planning. After all, you can't forecast cash flow unless you can estimate your future receipts. You can estimate those receipts from your sales and accounts receivable records.

Consider the value of carefully-maintained customer accounts and accurate statements. You might want to know what cash receipts will be one year from now. You could make an estimate from your projected sales and compare that to your current sales and cash receipts. Things may be a lot different in twelve months. You'll have completed many of your current projects and probably will be dealing with a new group of customers. But your past experience is still your best indicator of the future.

■ Track Your Receivables Trend

You can track your changing collection pattern by watching the trends in your collections. Every business has trends. You acquire new business and finish current jobs. You constantly move into new sets of circumstances that never stay the same for long. But you can establish a dependable pattern for forecasting the future. You should use this knowledge to steer away from customers and work that result in overdue balances or bad debts. That will cause a favorable trend in the collections area. If you aren't managing your receivables efficiently, your trend may be negative. You may be continuing to take on work that will cause collection problems.

Trends, good or bad, are difficult to see because they hide within changes in your sales volume. If you experience a gradual increase in volume and cash profits over a six-month period, the higher cash flow could obscure the slow collection of your accounts. You may be accumulating hard-to-collect or uncollectible accounts as volume grows. Watching the

Accounts Receivable Average Length Study				
	(1)	(2)	(3)	(4)
Month	Average Receivables*	Twelve Months' Charge Sales	Col. 1 Divided by Col. 2	Average Days of Outstanding Receivables (Col. 3 x 365)
January	\$22,692	\$250,611	.091	33.2
February	18,276	246,003	.074	27.0
March	20,112	280,492	.072	26.3
April	20,040	291,802	.069	25.2
May	17,486	276,014	.063	23.0
June				
July				
August				
September				
October				
November				
December				
*Excluding retainages				

Figure 4-1
Accounts receivable average length study

trend will alert you to major problems before they develop.

The most common way to chart your accounts receivable trend is to calculate the number of days the average account is outstanding. This information isn't of much use for just one month. But when you compare several months, you'll begin to see a trend. Your goal is to collect nearly all accounts within a reasonable period. Regardless of your sales volume, keep your average collection period down. On a smaller volume the money is needed for daily operations, so limits are enforced strictly. When volume increases, many builders tend to allow receivables to stay open longer. It's easy to do, because more cash is available as profits increase. The manager may feel less pressure to collect the accounts promptly. Naturally, this relaxation of controls can be dangerous.

An excellent way to keep tab on collections is to prepare an accounts receivable average length study, as in Figure 4-1. This indicates whether your collection rate is stable, increasing, or decreasing. If volume is increasing and the average days of outstanding receivables is increasing, you need to tighten collection procedures. If collection rates are decreasing or remaining about the same, your collection effective-

ness isn't changing. Of course, you may still wish to improve on your collection procedures. It depends on what standard you establish as acceptable for outstanding receivables.

Look at Figure 4-1. For this analysis, don't include retainage in your total of accounts receivable. Retainage often represents such a significant percentage of your total receivables that it would distort your collection analysis. As mentioned in Chapter 3, retainage should be controlled separately from other accounts receivable.

The analysis in Figure 4-1 is based on an average of twelve months' receivables and charge sales. Sudden jumps in the average days of outstanding receivables can result from changes in average volume (such as a large job done on credit) or from large payments coming early or being delayed. Using figures for twelve months helps to minimize the effect of unusually slow or busy work periods.

Column 1 of Figure 4-1 is the sum of accounts receivable (excluding retainages) in each month for the last twelve months. For example, the February average is the sum of the twelve previous months from last March through this February, divided by

twelve. Each month the average is updated by dropping the figure from the oldest month and adding the total for the current month:

Sum of accounts receivable for 12 months ending with the latest month \div 12 = Period of average receivables

Column 2 is computed in the same way but is the sum of charge sales for the last twelve months (not divided by twelve). It represents the total charge sales for the past twelve months (excluding retainage):

Total charge sales for 12 months ending with the latest month = Twelve months' charge sales

Dividing the average receivables by the twelve months' charge sales gives the factors listed in column 3. These, multiplied by 365 (days in one year), give the average days of outstanding receivables as listed in column 4.

Average receivables
(12 months' charge sales) \times 365
= Average days for outstanding receivables

The management at Johnson Construction can see from this average length study that since January 1 the average length (in days) for outstanding receivable accounts has decreased from 33.2 days to 23.0 days. This is especially gratifying because the twelve-month sales are higher on May 31 (\$276,014) than they were on January 31 (\$250,611). A combination of earlier average payments, good internal controls, and fewer old accounts results in a favorable trend like this.

The value of this kind of report is in the trend, not the numbers. The actual figure depends on the type of business you handle and the policy you've established about due dates. Every builder could have a different reasonable average. But it's important for you to know *your* average, and to watch the trend.

Reversing an Unfavorable Trend

Suppose you prepare a comparative average length study and discover that your average outstanding days are increasing. How do you reverse the trend?

Many builders are reluctant to pressure their clients for amounts due on account. That's understandable. But if your collections are slower now than they were six months ago, you'd better try a more aggressive approach. Call the customers and ask for a commitment to pay by a certain date. As you probably know, the longer you let a balance remain

outstanding, the less collectible it becomes. Your accounts receivable aging list will reflect your collection success. If you're effective, the number of delinquent accounts will drop.

So that's the first rule: Stay on top of existing accounts. But there's another important part of the receivables equation: Prior qualification of new charge customers. Ask for credit references and make one or two phone calls before you allow credit. A responsible company or person shouldn't object to this. Your professionalism points out that you are a sensible business owner who wants to deal with those who pay their bills promptly.

Figure 4-2 is a credit application. Make it a company policy not to extend credit unless there's an application on file. The application can be completed in a few moments and is a good way to screen credit requests.

Uncollectible Accounts

Sometimes you can't collect an outstanding account. Maybe the person skipped town, or claims to have no money. At this point you might contact a local collection agency. If you've been actively trying to collect, chances are the agency can't help you. But their fees are often based on collections, so it wouldn't hurt to give them a try.

If you haven't made an effort to collect the debt, a professional collection agency is more likely to be effective. Be sure to enlist a reputable firm. Many states have governmental agencies that control debt collectors. Find out if your state has one. If it does, it's a good idea to call them and ask if the collection company you're considering is approved or licensed.

You or your accountant will make entries into and out of your accounts receivable account for sales transactions, bad debts, and for accounts assigned to a collection agency.

Let's hope you don't have enough bad debt volume or collection agency assignments to justify separate accounting for these categories. But when you assign an account to a collection agency, list it in a separate column in your accounts receivable analysis, and exclude these figures from monthly totals. This way, you avoid distorting your receivables and collections trend.

Johnson Construction Company Application for Credit

This is an application for a line of ☐ business ☐ personal credit for:

Name

Address

City

Telephone

How long in this area? _____

Name of bank _____

Please list three local credit references:

Name

Telephone

Account number

Please describe the materials or services you would like to buy from Johnson Construction Company:

Will materials be for resale? Yes _____ No _____

(If yes, you will be asked to fill out a resale certificate, as required by law)

Please estimate your required credit line: \$ _____

It is the company policy of Johnson Construction Company to check credit references before we agree to a credit arrangement. We'll accomplish this in the shortest time possible. We look forward to doing business with you.

The Management

Figure 4-2
Credit application

Follow your accountant's advice about when to write off a delinquent account. Always document your collection efforts from the time an account became past due. This supports a decision to write off an account. For accounts large enough to justify a lawsuit, a log of your collection attempts is extremely valuable.

An efficient way to keep a log is by day, rather than by account. Most customers pay in full even if they're a few weeks late, so you don't need a separate sheet for each account. A lined blank book is adequate for your collection log. Draw and label the columns as you please. A typical collection log might include the following:

Date:

Account and amount due:

Contact by: (phone, visit, etc.)

Spoke to:

Discussion: (payment arrangement, date promised, etc.)

Include any other information you feel would be of value to you in collecting the debt. Debtors who get highly personalized treatment often respond more favorably to an appeal. Let your debtor know that he's not just a number in your books. You're interested in his account and plan to stay interested until it's settled. He may be suffering a temporary cash flow problem himself, and you want to retain him as a customer when his situation improves. Record in your log the

promises and excuses you receive and use this information if you have to pursue the matter further. The log can contain minimal information and still be useful. Since most of your customers will eventually pay, try to avoid duplicating the records that exist on your customer account cards.

It might be helpful to design a series of collection notes like those in Figures 4-3 through 4-5 as a collection aid. You can also buy stock forms at stationery and office supply stores. Your communication should be progressively stronger as accounts become more overdue. If you send collection letters to customers, have an attorney review them to make sure you stay within the law. Many states regulate collection procedures to protect the public against excessively aggressive practices. The standards vary from state to state.

■ Receivables As a Planning Tool

The information you compile on your accounts receivable is essential to your planning and forecasting. One of the most critical tasks you face as a builder is the cash budgeting required to prepare for major financial commitments. The fact that you bid major jobs implies that you're prepared to buy or lease the equipment and machinery you'll need. And

Johnson Construction Company

Dear Customer:

Your account is now past due. Your prompt payment will be appreciated.

Please forward your payment in full for \$ _____, as soon as possible.

Cordially,

Johnson Construction Company

Figure 4-3
First overdue notice

Johnson Construction Company

Dear Customer:

Your account is past due in the amount of \$ _____. You were expected to make payment under the terms which were specified to extend a line of credit to you.

Please call our offices and let us know when we can expect your payment. If there is a problem, we will be glad to discuss an agreed schedule of installment payments.

Take care of this today to avoid collection actions on our part.

Johnson Construction Company

Figure 4-4
Second overdue notice

Johnson Construction Company

Our Attorney will be contacting you within a few days if your account is not paid in full immediately.

Businesses depend upon customers' payments in order to operate. The law provides for fair compensation, and allows, through lawsuit actions, to collect cash when due and payable

When payment is not made, the law will provide for assignment of bank funds or seizure of property in lieu of such payments.

We will expect to have your payment in our offices within forty-eight hours.

The Management
Johnson Construction Co.

Figure 4-5
Final overdue notice

to develop an adequate labor force, you've got to keep your good workers busy and meet regular payrolls even when you haven't collected for work already finished. Insurance, a variety of taxes, licensing and permit fees, office expenses, union welfare payments, and normal business overhead are obligations that require regular cash outlays.

All these financial obligations must be anticipated. Any growth you expect in the future will be based on your ability to generate enough working capital. Having that cash when you need it depends on the effectiveness of your planning — and your collections.

An average length of collections study (Figure 4-1) should take you only a few minutes each month. This, along with an accounts receivable aging list, will help

you control your receivables. If your customer ledger is maintained properly, if you qualify your accounts before doing work on credit, and if you prepare and mail monthly statements regularly, you'll very likely receive the payments you expect.

It may help to offer incentive discounts, such as "2% – 10 days, net 30." That means the customer can deduct 2 percent from the invoice when payment is sent within 10 days of the billing date. This is a standard arrangement for shops that offer discounts and it seems to bring payments in quickly. The obvious disadvantage is the 2 percent loss. But consider the cost of doing without those funds for 30 days or more. It may be worth much more than the 2 percent discount to collect 98 percent of your receivables promptly.

Test Questions:

1. The average number of days that accounts receivable are outstanding is computed by:

- A. Dividing 12 months' charge sales by average receivables.
- B. Dividing average receivables by 12 months' charge sales.
- C. Dividing unpaid balances by the number of days since the sale.
- D. Multiplying the number of days by the average of monthly sales, excluding cash sales.

2. When the number of days receivables are outstanding is on the rise, it's a sign that:

- A. Your collection controls are improving.
- B. It's taking less time to get your money.
- C. It's taking more time to get your money.
- D. Your net profits are also on the rise.

3. It's a good idea to take applications for credit because:

- A. That way, you're sure to get the correct name and address for billing purposes.
- B. Your customers expect it.
- C. You should check out each person's credit and ensure that they're a good risk.
- D. You cannot legally collect money from your customers until they have filled out the form.

4. Letting accounts get too far past due is a bad idea because:

- A. The longer you let it go, the harder it will become to ever collect.
- B. Letting people pay late hurts your cash flow and, ultimately, your profits.
- C. You have to spend time and money rebilling past due accounts.
- D. All of the above.

5. When you turn an account over to collection, you should:

- A. Exclude those balances from your aging list, so as to not distort your analysis.
- B. Reduce the balance of the accounts receivable account by the same amount.
- C. Set up a liability account in case the agency doesn't collect what is due.
- D. All of the above.

6. Any balances of retainage should be:

- A. Excluded from your average length study.
- B. Included and treated like any other account receivable.
- C. Set up in an account in a completely separate section of the general ledger.
- D. Treated as earned income and not as a receivable.

7. You can tighten collection procedures by:

- A. Issuing prompt, accurate statements right at the end of the month.
- B. Getting on the telephone as soon as an account becomes past due.
- C. Refusing further credit to those who don't pay on time.
- D. All of the above.

8. You need to control receivables during busy and high-volume periods, because:

- A. Your accountant will require it.
- B. There is a tendency to relax controls when sales volume increases.
- C. Employees might get lazy in the way they work if there's too much to do.
- D. If you skip a billing, you can't legally collect it later.

9. You can provide an incentive to customers by:

- A. Promising to not contact the credit agency if they pay promptly each month.
- B. Increasing their line of credit as an incentive to pay early.
- C. Offering a discount for payment on or before the 10th of the month.
- D. Hiring your own collection agent and letting him talk to your customers.

10. If someone can't make payments on time, you can:

- A. Propose a monthly repayment schedule.
- B. Forbid or limit future credit.
- C. Get a commitment for a deadline for full payment, plus interest.
- D. All of the above.

11. An accounts receivable "average length study" shows:

- A. The number of days of outstanding accounts receivable.
- B. The comparison between charge and cash sales.
- C. The trend in the local economy as it affects you.
- D. The average length of time it takes you to repay a loan.

12. Unfavorable trends:

- A. Are out of your control; they just have to run their course.
- B. Indicate it's time for more aggressive collection action.
- C. Generally have little long-term effect on a healthy business.
- D. Indicate you may need to change your career plans.

13. You can prevent a lot of collection problems by:

- A. Dealing only in cash.
- B. Insisting on payment the same day as delivery.
- C. Having customers fill out credit applications and checking up on them.
- D. Having a reputation of being willing to file lawsuits.

14. In attempting to collect past due accounts, a collection telephone log is best kept by:

- A. Customer phone number.
- B. Last name of customer.
- C. Date.
- D. Job code.

15. Incentives for faster payment include ideas such as:

- A. Offering incentive discounts for timely payments.
- B. Raising prices as payments become past due.
- C. Offering free merchandise from time to time.
- D. Having different price levels for each customer.

Bad Debt Procedures

If your business has few or no bad debts you can skip through this chapter quickly. Unfortunately, most builders do have fairly significant bad debts despite the protection most states offer under lien laws. Bad debts can be a big profit drain on your business. You need to understand how to handle them correctly to reduce your bad debt losses.

When you sell on credit, the money owed you is income that's *booked* or recorded as an account receivable. But you know that you won't always collect all that money. From time to time you'll have bad debts. That's why you need an accounting system that allows you to budget expenses and plan for the future by:

- letting you record the actual bad debts
- helping you analyze your collection trend

When an account becomes uncollectible, you must reverse the income you recorded previously. To do this, you "write off" an account in both the general ledger and on the customer's account ledger. You could write off the account on the sales journal itself, but that's not what most accountants recommend. Instead, make a special journal entry rather than record the amount uncollectible as a sale in reverse. This process, adjusting by journal entry, distinguishes the write-off as a special transaction. It's better to isolate the entry as an unusual occurrence.

■ When Does an Account Become Uncollectible?

Generally, you should write off a bad debt only after exhausting all efforts to collect. For any significant amount, telephone until you're convinced the customer can't or won't pay. But the rules change if you receive notification that the customer has filed for bankruptcy. At that point the law provides a procedure for filing a claim for payment. Further efforts at collection may violate federal law.

For tax purposes, bad debts can be recognized only when:

- a debtor's business is abandoned and worthless
- he can't be contacted
- he passes away and leaves a worthless estate

So for a true bad debt, the possibility of collection must be just about nonexistent. If a debtor dissolves his business but has net assets, his liabilities may be paid. If he moves away, you must try to contact him before you can claim that he has disappeared. And if he dies, the debt is transferred to his estate.

Journal Entries for Bad Debts

If you do a lot of business on credit, your bad debt losses will be fairly predictable. Your general ledger should include an allowance for anticipated losses. You do that by establishing a *reserve* for those losses. That's a reduction of your total accounts receivable. No matter how you estimate the amount of these losses, the provision for bad debts is an estimate of bad debts for the month. The allowance is balanced by a similar amount in bad debt expense. The entry in your journal would look like this.

	Debit	Credit
Bad debt expense	xxx	
Reserve for bad debts		xxx

This is a *provision*, an amount which you estimate will cover future losses. When an account becomes uncollectible, the bad debt is recorded. Since you have already provided for this and other losses, and have recorded the expense, the entry to record the bad debt is:

	Debit	Credit
Reserve for bad debts	xxx	
Accounts receivable		xxx

This entry reduces the reserve for bad debts by the amount of the actual debt. It's proper to record the expense as an estimate earlier because you want to recognize the loss when you record the sale. The losses you take in the future will occur on accounts you now have as receivables.

Setting up a reserve for bad debts has some important advantages. First, your books are useful to

you only if they reflect what is really happening in your business. Your profit and loss statement each month should tell you how well your company is doing. If you don't reduce monthly profits by the bad debts you expect, your books won't truly reflect your profitability. Second, and perhaps most important, your business pays taxes on its profits at the end of each year. If you don't adjust your accounts receivable for bad debts that are sure to occur, you pay federal and state income taxes on profits you will never see. For these reasons, most companies that have significant and regular bad debt write-offs set up a provision for bad debts.

Estimating Bad Debts

There are two common ways to estimate bad debts. First, you can analyze your accounts individually and calculate your estimate on a case-by-case basis. This is practical only if you have a limited number of accounts and are in close contact with your customers. In a situation like this, your educated guess would probably be better than any formula for predicting future losses.

Because you don't know what your actual losses will be, your bad debt reserve, like other reserves, is always an estimate. The estimate is more accurate if you use your past collection record developed over several years. Compare actual losses to sales on account for a two-year period to find your typical loss ratio. If your loss experience begins to exceed this ratio, you should look for the reasons for the trend.

But remember that your estimate for bad debts should be reasonable. For example, a single large bad debt in the past year might distort the current estimated uncollectible accounts. Exclude unusual situations from your analysis to get a fair picture of your future. On the other hand, you might know of one or more large problem accounts currently on your books. If this is so, you might want to increase your estimate of uncollectibles for the coming year.

Figure 5-1 shows a bad debts study. Just as in Chapter 4, the March numbers have been extended and are used here for May to show a longer trend period. The figures in Column 1 are actual bad debts. These amounts have become uncollectible in each month, and were charged against the reserve for bad debts.

Credit sales (Column 2) are broken out from total sales because only credit sales become bad debts. You could use the total sales figure, but any variation in

Bad Debts Study 20 _____						
Period	(1) Actual Bad Debt Losses	(2) Total Credit Sales	(3) Ratio (1÷2)	(4) Year to Date Ratio*	(5) Month-end Accounts Receivable Total **	(6) Current Entry Reserve for Bad Debts ***
Prior year total	\$5,180.00	\$248,200	1 to 48	1 to 48		
January	600.00	\$23,682	1 to 39	1 to 39	\$26,268	\$547.00
February	-0-	23,900	—	1 to 79	26,933	561.00
March	450.00	24,106	1 to 54	1 to 68	28,580	595.00
April	522.16	24,610	1 to 47	1 to 61	28,423	418.00
May	-0-	23,961	—	1 to 76	29,061	427.00
June						
July						
August						
September						
October	*Current year's total actual bad debts (sum of col. 1) plus current year's total credit sales (sum of col. 2)					
November	**Excluding retainages					
December	***Col. 5, divided by col. 4, adjusted quarterly					

Figure 5-1
Bad debts study

the ratio of cash sales to credit sales would invalidate your estimate.

Column 3 shows the ratio of bad debts to total credit sales. A ratio expressed as "1 to 48" means that 1 out of every 48 credit sale dollars became a bad debt.

Total credit sales ÷ Actual bad debt losses = Bad debt ratio

Column 4 shows the year-to-date ratio. This is computed the same way as the monthly ratio, except that year-to-date totals are used rather than the monthly totals. For the first quarter:

Total credit sales in
January, February and March

Actual bad debt losses in
January, February and March

= Year-to-date bad debt ratio

The year-to-date ratio is the key figure to watch. It's the monthly update of the year-to-date ratio that shows the trend of your bad debt experience.

The month-end balances of accounts receivable (Column 5) exclude retainage. The figure in Column 6 is recorded as the reserve for bad debts and is computed by dividing the month-end receivable balance by the year-to-date bad debt ratio. In this example, the divisor is the year-to-date ratio at the end of the previous quarter (the underlined ratios). Using the ratio

for the previous quarter avoids distortion that would result from a heavy or light write-off in a single month. The ratio you develop should vary only with sharp changes in your accounts receivable balance.

Month-end balance
of accounts receivable

Year-to-date bad debt
established at end of
previous quarter

= Reserve for bad debts for the
current month

The bad debt study gives you a quick method for reviewing your bad debts, creates a useful record of bad debt experience and shows the trend of problem accounts. Figure 5-1 shows that the previous year's bad debts were 1 dollar in every 48 dollars of credit sales. The year-to-date bad debts as of May 31 were 1 dollar in every 76 of credit sales. If this ratio holds throughout the year, Johnson Construction has improved its collection picture.

If you want to refine your analysis of bad debts, take a few minutes each month to prepare a bad debt trend report like Figure 5-2. This report lets you use your past records as a guide to evaluate future collections. The ratio of credit sales to total sales in the fourth column is an important figure. The trend of these ratios shows the trend of your business. In the example, total

Bad Debts Trend

20____

Period	Total Credit Sales	Total Sales	Ratio	Y.T.D. Ratio	Delinquent Rec.	Total Rec.	Ratio	Y.T.D. Ratio	Bad Debts Ratio**
Prior year	\$248,220	\$288,640	1:1.16	xxx	\$3,286*	\$23,406*	1:7.1	xxx	1:48
January	23,682	26,901	1:1.14	1:1.14	3,788	26,268	1:6.9	1:6.9	1:39
February	23,900	27,006	1:1.13	1:1.13	4,080	26,933	1:6.6	1:6.8	1:79
March	24,106	27,281	1:1.13	1:1.13	4,418	28,580	1:6.5	1:6.7	1:68
April	24,610	27,460	1:1.12	1:1.13	4,862	28,423	1:5.8	1:6.4	1:61
May	23,961	28,158	1:1.18	1:1.14	5,100	29,061	1:5.7	1:6.3	1:76
June									
July									
August									
September									
October									
November									
December									

*Average

**Bad debts ratio is from Figure 5-1, "Bad Debts Study"

Figure 5-2
Bad debts trend

sales remain about 1.14 to 1 over credit sales, but bad debts are decreasing as a percentage of credit sales. That's a favorable trend. If bad debts were increasing against a steady credit sales volume, the trend would be unfavorable.

The ratio of delinquent receivables to total receivables (third column from the right) shows a decrease. This is a good trend. Remember, the older an outstanding balance becomes, the more likely it is to become a bad debt.

Ratios are very useful in understanding the relationship between numbers. The numbers on your general ledger and on your financial statements represent very real things — cash in the bank, lumber stacked up in your warehouse, or a loss from an uncollected account. The significance of those numbers is more apparent when expressed as a ratio. The dollar amounts don't tell the whole story. For example, assume that bad debts for six months were:

January	\$20.00
February	35.00
March	55.00
April	160.00
May	215.00
June	385.00

True, it looks like bad debts are rising at an alarming rate. But if the volume of credit sales were also increasing rapidly, the ratio of bad debts might actually be decreasing:

	Bad Debts	Credit Sales	Ratio
January	\$20	\$900	1:45
February	35	1,850	1:53
March	55	3,000	1:55
April	160	9,000	1:56
May	215	12,500	1:58
June	385	23,000	1:60

It is unlikely that you would experience a rate of growth that rapid, but the example does show that the dollar figures themselves don't always tell you what you need to know. The ratio is the key figure to watch.

The following calculations were made to compute the two ratio columns in Figure 5-2.

Total sales ÷ Total credit sales = Credit sales ratio
Total receivables ÷ Delinquent receivables = Delinquent ratio

Delinquent receivables are the amounts due more than 30 days. They have a predictable effect on bad debts. For that reason, Figure 5-2 includes the year-to-date ratio of bad debt losses to credit sales (from

Year-to-Date Ratio Summary
Credit Sales and Bad Debts
For the year 20_____

Month	Credit Sales to Total Sales	Delinquent Receivables to Total Receivables	Bad Debt Losses to Credit Sales
January	1 to 1.14	1 to 6.9	1 to 39
February	1 to 1.13	1 to 6.8	1 to 79
March	1 to 1.13	1 to 6.7	1 to 68
April	1 to 1.13	1 to 6.4	1 to 61
May	1 to 1.14	1 to 6.3	1 to 76
June			

Figure 5-3
Year-to-date ratio summary

Column 4 of Figure 5-1). Gather all this information on one worksheet. This gives you a good picture of your collection experience.

Summaries like the bad debts trend report are valuable because they support the financial statements required by your bank or bonding company. Back up your claim that you can collect a high percentage of your accounts receivable with a report like Figure 5-2 covering a two- or three-year period. Lenders must rely on the loan documents you provide. Since they don't know how collectible your accounts are, a good historical summary will help you to prove your case.

Figure 5-3 is a year-to-date ratio summary. This information comes from the ratios in Figures 5-1 and 5-2, but excludes dollar amounts. The ratios in Figure 5-3 help determine what steps you should take to avoid uncollectible accounts.

Read the information in Figure 5-3 for January as follows: "There was \$1.00 of charge sales for every \$1.14 of total sales. In the same month, \$1.00 in accounts receivable was delinquent for every \$6.90 of total receivables. We wrote off \$1.00 in every \$39.00 of credit sales."

The example shows these trends:

- The ratio between credit sales and cash sales is about the same in May as it was in January.
- The ratio of delinquent receivables declined from January to May.
- The amount of total credit sales resulting in bad debts is about half in May of what it was on the average in January. (\$1.00 in every \$39.00 was written off in January; only \$1.00 in every \$76.00 in May.)

Why is this information valuable? Because you have to understand what you're doing right and wrong before you can do more of what you should be doing.

In the example, the trend is favorable. Delinquent receivables and bad debts are declining together, the result of good management. This is happening while the relationship between credit sales and total sales remains about the same. But the following would indicate an unfavorable trend:

- Increase in delinquent receivables.
- Delinquent receivables remain the same while bad debts increase.
- Delinquent receivables and bad debts remain the same while credit sales decrease in relation to total sales.

Developing information about your receivables requires only a few minutes each month. When you have compiled data for several months, a comparative study of the information will be more valuable to you.

You must control your accounts receivable. To do that, you need to know the trend of your credit sales and bad debts. A builder who has a high ratio of bad debts doesn't have well-defined procedures for extending credit, billing his customers, and making collections.

Don't ignore future bad debts when you prepare your cash forecast. Without a good projection of bad debt losses, your estimate of available cash can be totally wrong. Cash budgeting is explained in Chapter 14.

Accounting for Bad Debts

Two accounts were introduced in this chapter — reserve for bad debts and bad debt expense. You make month-end journal entries to record the provision for bad debts and the offsetting expense. When actual bad debts occur, reduce the provision and the accounts receivable total by the amount being written off. When an account becomes uncollectible, update the customer ledger cards to record the same bad debt that flows through the general ledger. If you don't do this, your customer ledger control card won't balance to the general ledger's total for accounts receivable.

The reserve for bad debts account is a reduction of your current assets, and should appear in the general ledger immediately after the accounts receivable. When listed on a financial statement, the following order is standard:

Current Assets:	Debit	Credit
Cash (one item or by type)		xxx
Accounts Receivable	xxx	
Less: Reserve for Bad Debts	(xxx)	
Net Trade Accounts Receivable	xxx	
Retainage	xxx	
Total Accounts Receivable		xxx

Following this partial listing would be the remaining current assets, such as the earned income account.

Bad Debts and Cash Systems

The procedures described for booking bad debts are relevant only if you accrue income. You reverse income by journal entry because you can't collect the money. The process is different when you keep your books using the cash accounting method.

On a cash basis, the bad debt is just as bad, but you haven't recorded as income money that you will never receive. Remember, in the cash accounting system, income is booked only when you receive it. So the bad debt actually never makes it onto your books.

How do you keep track, then? Some firms have receivables but keep their books on the cash basis. This is perfectly legitimate. However, you still need to keep track of receivables and, of course, of bad debts. In this situation, the records you keep for accounts receivable are identical to those you keep in the accrual system. But the accrual entries remain in an accounts receivable ledger as a subsidiary system and are never entered into the general ledger.

In this situation, you need records outside the accounting system. In cash basis accounting, the books contain only cash transactions. Matters such as receivables and bad debts take place elsewhere. Refer back to Chapter 4 for more information on recording and managing receivables.

If you do business on credit, there's no way you can eliminate all bad debts. But if you follow the procedures outlined in this chapter, you can keep bad debt losses under control and learn from your mistakes before they do serious damage.

Test Questions:

1. When you write off a bad debt, an entry is made in:

- A. The customer's individual account.
- B. The general journal.
- C. The general ledger.
- D. All of the above.

2. A journal entry for recording a bad debt consists of:

- A. A debit to accounts receivable and a credit to sales.
- B. A debit to bad debt expense and a credit to accounts payable.
- C. A debit to bad debt expense and a credit to the reserve for bad debts.
- D. A debit to sales and a credit to miscellaneous expenses.

3. For tax purposes, a debt becomes recognized as worthless when:

- A. The debtor's business is abandoned or worthless.
- B. The debtor cannot be found.
- C. When the debtor passes away and has a worthless estate.
- D. All of the above.

4. A reserve for bad debts is established as:

- A. A credit balance, or negative asset.
- B. A liability.
- C. An adjustment to gross sales.
- D. A net worth account.

5. Setting up a reserve is a good idea because:

- A. It allows you to save up money to cover your bad debts.
- B. It acts as an equalizing account so that bad debts actually written off in future years are partially recognized now.
- C. It prevents future losses that might be larger.
- D. All of the above.

6. A bad debt ratio is computed by:

- A. Dividing actual bad debt losses by total credit sales.
- B. Dividing total credit sales by actual bad debt losses.
- C. Dividing month-end accounts receivable by the estimated amount of bad debts.
- D. Dividing total sales by average monthly accounts receivable.

7. When a ratio of delinquent receivables decreases, the trend is:

- A. Meaningless if volume continues to rise.
- B. A negative trend.
- C. A positive trend.
- D. Good or bad, depending on the degree of sales made in cash or charged.

8. When the dollar amount of bad debts are rising every month, it signifies:

- A. A growing bad debt problem.
- B. A growing dollar amount of bad debts, which might not be negative if the ratio is even or declining.
- C. That your collection procedures are too lax.
- D. That better controls are needed in collections and in the granting of credit.

9. Having good analysis of bad debts and receivables is important because:

- A. Your bank might want such verification for loan underwriting.
- B. Your bonding company might want to see your analysis to determine your financial strength.
- C. You will need to study the numbers in order to control trends.
- D. All of the above.

10. A year-to-date ratio summary concerned with bad debts helps you to:

- A. Comply with rules requiring that such studies be completed in a timely manner.
- B. Track your trends so that you will be able to maintain control.
- C. Identify the point where customers are taking advantage of you.
- D. All of the above.

11. A bad debt is essentially:

- A. A payment that arrives after the close of the fiscal year.
- B. A loan that the IRS discounts.
- C. An account receivable you write off as uncollectable.
- D. A loan you take out that is an account receivable.

12. A journal for a bad debt consists of two steps, which are:

- A. An adjustment to cash and income, followed by a reversal.
- B. An adjustment to income and then to accounts receivable.
- C. Recording the expense against a reserve, and then reducing accounts receivable.
- D. None of the above.

13. When using the reserve system, bad debts are:

- A. Always an exact amount.
- B. An estimate based on historical trends.
- C. Dictated by federal law.
- D. Always calculated as a percentage of accounts receivable.

14. A bad debt "trend" shows:

- A. The calculation of the bad debts ratio over time.
- B. Credit sales trends for your best customers.
- C. How efficiently you manage cash sales.
- D. Which customers pay on time, and which ones are always late.

15. When you use the cash system instead of the accrual system:

- A. You don't record a bad debt because it's off the books anyway.
- B. You don't record a bad debt because you haven't previously entered a sale.
- C. You do record the bad debt because it's still an expense of doing business.
- D. You do record the bad debt because you need to track accounts receivable.

Sales Records and Cash Budgeting

Many builders make the mistake of taking on unprofitable work. You may believe that all the work you do produces an acceptable level of income. In reality, one or more types of work may be draining income from your business. The only way to find out what jobs are making and losing money is to analyze your sales records by the types of work you do.

We've already discussed sales records. Your sales record is more valuable if you break down the figures by job. A set of versatile forms and a few simple procedures will let you keep a record for each job nearly as easily as keeping a single sales journal.

■ Analyzing Sales Records

To analyze sales, you must be able to look at your receipts for a particular type of work and compare your results there to the rest of your business. Chapters 7 and 8 explore this analysis in more detail. This chapter is intended to familiarize you with the basic kinds of sales analysis and to show you how to budget for future income. We'll also explore some useful profit ratios.

Figure 6-1 is a summary of cash receipts. Notice that this is neither a summary of billings nor of earned income — it shows *cash receipts* only. This is essential for cash budgeting: planning for future available funds.

In Figure 6-1 the cash receipts for the month of March are broken down by job name except for a last category, *All Other*. The builder knows about how long each named contract will take to complete. From that, he can estimate cash receipts and costs at each stage of completion. The final category, *All Other*, presents a serious problem because, in this case, it represents

Summary of Cash Receipts
March, 20_____

Name	Cash Received	% of Total
Anderson	\$2,815.00	10%
Carey	2,328.00	8
Norwich	159.66	1
Rayne	1,619.66	6
Widmark	819.90	4
Windsor	974.00	3
All Other	18,803.74	68
Total Cash Receipts, March 19____	\$27,519.96	100%

Figure 6-1
Summary of cash receipts

the largest single portion of receipts (68 percent). This category is examined further in Figure 6-2.

Figure 6-2 divides the *All Other* category into specific types of income. This is the first step toward developing a realistic projection of receipts. The more detail available, the more likely that a forecast will be accurate. Figure 6-2 shows that Johnson Construction has two principal types of “other” income:

- repairs and improvements
- material sales

The income from repairs and improvements provides a steady flow of cash each month. This regular income helps cover payroll and inventory during slow periods. Material sales are resales to other contractors, landscapers, roofers, and so forth. Also included in the material sales category are retail sales made to the general public from Johnson Construction’s

Cash Receipts, Other Income - by Type
March, 20_____

Name	Total	Repairs and Improvements	Material Sales Only	Other Income
Black’s Landscape	\$900.00			\$900.00
M. Brown	482.11	\$482.11		
C. Carlson	641.27	641.27		
L. Carlson	173.05	173.05		
Harvey Contracting	1,412.00		\$1,412.00	
Hiram & Hiram	3,400.00	3,400.00		
Jim’s Contracting	392.00		392.00	
L. Jones	74.00	74.00		
Karston Landscape	3,200.00		3,200.00	
LBN Brothers	245.00			245.00
K. Middleton	145.27	145.27		
Midfield School	82.17	82.17		
B. Ottman	169.34	169.34		
L. Peterson	477.55	477.55		
Riley Landscape	2,058.00		2,058.00	
J. Smith, Builder	525.00			525.00
D. Thomas	706.08	706.08		
Triumph Construction	3,000.00	3,000.00		
Woodman	425.00		425.00	
J. Woods	295.80	295.80		
Total	\$18,803.64	\$9,646.64	\$7,487.00	\$1,670.00

Figure 6-2
Breaking down cash receipts for “All Other”

lumber yard. The last column, *Other Income*, is for all sales that don't fit into the other two categories. These would include income from hauling of deliveries.

Figure 6-2 makes clear the meaning of *All Other*. Of course, a more detailed analysis is possible. They could break down the material sales into retail and wholesale, and divide repairs and improvements into two categories. But that kind of detail isn't necessary in this case. It would provide more information than needed to forecast future receipts.

Figure 6-3, the detailed cash receipts summary, is more informative than Figure 6-1. It's a summary of the cash received by job or type of business. It shows where income is generated and that makes it an excellent forecasting tool. The 68 percent of *All Other* income is broken down into the three principal categories shown in Figure 6-2.

Notice that Figure 6-3 puts the work done by the Johnson Company in March in perspective. A high percentage of cash receipts generated from one place could indicate that moving into new areas might be dangerous. Or it could mean that the builder is overly dependent on one small part of his total operation to support a large portion of his cash needs.

This report is prepared from records that were created for a different purpose. Here we want to break down the *sources* of cash receipts. But except for this analysis, there is no accounting need to break down cash generated by line of business. That makes this report a management tool rather than an accounting report. Let's face it, the accountant is concerned with making sure that earned and accrued income, cash and accounts receivable all balance. *You* want to know the answer to a different question: Where does the money come from?

Prepare a summary like Figure 6-3 every few months, or whenever you consider changes in your business. It's essential before you decide to go into new markets or out of old ones. It's also a valuable summary when you want to forecast future available cash. If you did this study only two or three times a year, it would show seasonal changes in business volume for the different types of work you do.

Now use the information in Figure 6-3 to project where cash will be coming from and how much will be coming in during the next few months. Figure 6-4 shows a realistic estimate of cash receipts three, six, and nine months in the future. You could do a projection for each of the next nine months, but that much detail usually isn't necessary. Detailed budgeting for cash is discussed in Chapter 14.

Detailed Cash Receipts Summary March, 20__

Name	Cash Received	Percent of Total
Anderson	\$2,815.00	10%
Carey	2,328.00	8
Norwich	159.66	1
Rayne	1,619.66	6
Widmark	819.90	3
Windsor	974.00	4
All Other:		
Repairs and Improvements	9,646.64	35
Material Sales Only	7,487.00	27
All Other Income	1,670.00	6
Total	\$27,519.86	100%

Figure 6-3
Detailed cash receipts summary

Figure 6-4 projects cash receipts for the remainder of the current year based on how much cash has already been received and estimates of the time needed to complete each job. Here are some considerations that lead to the conclusions in Figure 6-4:

- Four of the six bid contracts will have been completed by year-end and are assumed to be replaced by two additional projects.
- In previous years, Johnson Construction has started at least two jobs during the summer and autumn and between three and six jobs in late winter and early spring.
- Material sales are expected to decline with the average temperature. Colder weather cuts into material sales but increases the demand for repairs and improvements.
- With the winter slowdown in home building, Johnson Construction estimates repairs and improvements to increase from 35 percent to about 55 percent of total cash receipts, based on previous years' results.

You can see how valuable this information is in planning for each year. This kind of spot budgeting can be done quickly with well-kept records and dependable historical data. Records like these help you understand your business and the market where you compete. It seems that Johnson Construction has developed a good system for keeping busy all year. This shifting of emphasis from one line of work to

Cash Projection by Income Type

For the Year 20____

Cash receipts projected for the month:

Sources of Funds	June, 20__		September, 20__		December, 20__	
	Amount	%	Amount	%	Amount	%
Anderson	\$1,430	5	\$3,140	10	—	—
Carey	2,860	10	1,256	4	—	—
Norwich	1,144	4	2,512	8	\$2,808	12
Rayne	1,716	6	1,570	5	1,170	5
Widmark	572	2	—	—	—	—
Windsor	—	—	—	—	—	—
Future Bid Contracts	1,430	5	3,140	10	1,170	5
Others:						
Repairs/Improvements	10,010	35	10,990	35	12,870	55
Material Sales Only	8,580	30	7,850	25	4,680	20
All Other Income	858	3	942	3	702	3
Total	\$28,600	100%	\$31,400	100%	\$23,400	100%

Figure 6-4

Cash projection by income type

another helps take advantage of seasonal demand and avoids large seasonal changes in inventory and work force.

When you use historical information to project even the immediate future, be careful to take into consideration any unusual circumstances in past years or the future. Several factors can affect the accuracy of your predictions:

- Building moratoriums
- Dramatic increases or decreases in market demand
- Changes in home prices and the availability of new and used home financing
- Mortgage interest rates for buyers
- Changes in the desirability of living in the community in which you will build
- Changes in your labor force, available cash, and equipment

Another valuable analysis you can make from your sales records is a comparison of net income to sales. The best way to figure your direct costs and overhead expense for each job is explained in Chapter 15. For now, assume that you know the net income for

each job. Your final report might look something like Figure 6-5. Calculate the profits by job or job type in your business, and you know where you're making or losing money. This kind of analysis is essential to good planning.

In some cases, you might decide to abandon even a profitable market because the risks aren't worth the rewards. Your risk includes your investment in capital and equipment, personnel time, and management. Devoting all of these resources to work that yields a small return means that more profitable markets may escape your grasp.

As shown in Figure 6-5, there may be varied returns on different jobs or job types. A builder looking critically at this list can see that the Dean, Ingrams, Parker and Sims jobs yielded the lowest profits, and Pearman was a disaster. Was there something about those jobs that shows a pattern? Do they represent a type of work to avoid in the future? Analysis might show that too much equipment was required on these jobs or that idle time was more than estimated. Or these jobs might have entailed unexpected costs and expenses, cutting into net profits.

With a little experience and analysis you can begin to distinguish unprofitable work from more

Summary of Profits to Sales			
Job Description	Net Profits	Gross Income	Ratio
Beale	\$2,615	\$55,000	1:21
Cauley	10,803	105,000	1:10
Davis	991	6,200	1:6
Dean	2,800	85,000	1:30
Farragut	1,466	35,000	1:24
Harrison	9,130	190,000	1:21
Ingrams	387	18,000	1:47
Nulty	4,000	90,000	1:23
Parker	676	65,000	1:96
Pearman	(2,490)	26,000	—
Sims	1,860	78,000	1:42
Repairs & Improvements:			
Last twelve months	7,860	143,904	1:18
Previous twelve months	4,914	78,272	1:16
Material Sales			
Last twelve months	6,718	80,012	1:12
Previous twelve months	6,190	76,300	1:12
All Other			
Last twelve months	560	8,347	1:15
Previous twelve months	844	10,410	1:12

Figure 6-5
Summary of profits to sales

profitable jobs and emphasize the type of work that helps you most. This is especially true if other types of work are available and within your company's capacity. Look again at Figure 6-5. If the Dean project, which yielded a profit of 1 dollar for every 30 sales dollars, had been replaced with work like the Cauley job, net income would have been \$8,500 instead of \$2,800 on the same sales volume.

Most builders can't participate in both low-profit business and high-profit business to maximum advantage — especially if a large portion of available assets and crew time have to be concentrated in high-volume markets. But remember that low-profit business may be more valuable than it seems on paper. Builders may purposely bid on low-profit work to cover oper-

ating expenses in slack seasons when more attractive work isn't available. It could even be to your advantage to accept work which will bring a net loss — more about that in Chapter 8.

Bidding on very competitive jobs could be the only way to avoid laying off a large part of your labor force. Then workers who contribute most to the quality of your business may find other work and be lost forever. To lose their productive labor is as much a loss as any other asset you own.

It's also important to keep sales records because they let you make financial statements by the job. When showing the differences between comparative periods or between one type of income and another, by-the-job records are essential. You can only prepare detailed financial statements by job when you have a complete set of records available. Another way to present financial statements is by comparative accounting methods (percentage-of-completion or completed-contract). To do this, you must be able to reclassify deferred and accrued income for each method. For this you need by-the-job sales records.

To understand the significance of sales and their varying values and yields on investment, you need:

- Detail records
 - Historical information
 - Meaningful reports
- To analyze those records and reports to direct your financial future, you need:
- Realistic income projections
 - An understanding of your markets
 - A knowledge of profit yield on various types of work
 - A plan of what work you want to do

Cash Flow Controls

One of the more elusive problems every business owner faces is planning for working capital. That's the cash you have to have on hand to pay the weekly bills — payroll, rent, utilities, suppliers, and everything else. You can have all kinds of impressive numbers on the books in unpaid accounts, but you can't pay the bills with them.

Accountants will tell you that a truly useful system is one that helps you plan ahead of time how much cash you'll have coming in and how much will

be going out. The estimate (projection) of incoming cash is the more difficult of the two, because you don't have control over your customers and their payment habits. But you *do* have enough control to make a difference.

Cash flow controls are more than filling out forms and studying the numbers after the fact. That form of “accounting” has some analytical value, but what you really need is a planning and control function. It lets you take control over cash flow to make sure the money's there when you need it. You can use your historical bookkeeping record system to identify potential problems from seasonal slowdown, customers who are slow to pay, or other obstacles to efficient cash flow. For example, you need to plan ahead for slow seasons, and to limit the amount of credit you extend to customers you know will be slow to pay for your services. Those are fairly obvious ways to manage cash flow. Here are more ideas you can put into action:

1. Follow up on your tracking systems. Don't let a deteriorating situation continue. If a customer is falling behind, get on the phone or pay him a visit. Get a commitment to pay that past-due bill.
2. Cut off overdue accounts. A common mistake is to continue granting credit to customers who are falling behind. The theory makes some sense: If you don't provide the materials, the customer will never pay the bill, so helping them stay in business is in your own interest. But in practice, it doesn't usually pay off to increase the debt of a customer who might not be able to pay. Cut your losses once you see a problem developing.
3. Keep monitoring, even when you're busy. All “systems” for tracking financial information have a common flaw. It's easy to keep track of your

finances when you have the time, but when you're busy, it's easy to let things go and count on the system to alert you. That's when problems occur — because you're not there daily making sure your customers continue to pay on time. When the system alerts you, there's already a problem with a customer account. Then their problems become your problem.

4. Plan ahead a few months, but be realistic. It makes sense to plan cash flow through the upcoming cycle. That means the season, the grouping of jobs you're currently working on, or the financial quarter. Going beyond that, you can't know for sure what to expect. A five-year plan might be interesting, but you really won't know what kind of cash flow to expect beyond the next few months.
5. Be honest with the numbers. Remember, the purpose of doing analysis is to find out what you need to do now in order to prepare for the short-term future. Avoid fooling yourself into believing that just because it looks like you're going to get rich on paper, it will be so. You can hope everything goes well. And, by planning realistically, you might get rich — but it'll take time, and you'll have to manage problems along the way. It's easy to forget reality and let your pencil and your imagination get ahead of you. It's like not fixing the broken odometer on your car, then holding onto the car because it's low mileage!

You need to be able to use the information in your books and records to increase your own understanding of your business. If you're a competent builder, you can practically guarantee your success by well-informed planning. True, the books, records, and reports you produce don't dictate results. But they provide the facts you need to make informed decisions.

Test Questions:

1. Cash budgeting is important in order to:

- A. Estimate next month's sales volume.
- B. Track last month's sales volume.
- C. Estimate monthly cash receipts from cash sales and payments on accounts receivable.
- D. Estimate how much you need to generate in charge sales next month.

2. Cash budgeting, broken down by lines of business, helps you to identify:

- A. Where you earn a profit and where you might be losing money.
- B. What kinds of seasonal fluctuations you can expect in each line of business.
- C. Whether or not it is worthwhile to continue in a particular line of business.
- D. All of the above.

3. Future cash flow could come from:

- A. Sales, collections on accounts receivable, and the sale of fixed assets.
- B. Sales only.
- C. Sales minus collections on account.
- D. Reductions in inventory only.

4. A good way to control and anticipate seasonal variations in cash flow is to:

- A. Get out of all unprofitable lines, and stay with the one line that is profitable most of the time.
- B. Shift seasonally into more profitable lines, based on demand.
- C. Anticipate slow seasons by borrowing money from your bank.
- D. Save up as much cash as you can before even going into business.

5. Factors that could affect even the best budget for future cash flow include:

- A. Building moratoriums.
- B. Dramatic changes in market demand.
- C. Changes in mortgage rates, home prices, or the demand for new construction in your community.
- D. All of the above.

6. The ratio of net profits to sales is computed by:

- A. Dividing net profits by gross income.
- B. Dividing gross income by net profits.
- C. Multiplying gross profit by net profit.
- D. Dividing net profit by gross profit.

7. Cash budgets, essentially, are:

- A. An attempt to judge the probabilities of the near-term future.
- B. Intended to identify a precise budget outcome.
- C. Part of the general ledger.
- D. Included in the cash journal.

8. You might be willing to abandon profitable markets when the risks are too high. These risks can include:

- A. Investment in fixed assets.
- B. Manpower time.
- C. Management time.
- D. All of the above.

9. Cash receipts by the job are constructed from:

- A. The cash receipts journal.
- B. Detailed records kept for other purposes.
- C. The general ledger.
- D. Your accountant's records.

10. When you get a high portion of income from only one customer, it is:

- A. A good sign, since it requires less selling and management to maintain the account.
- B. Easier, since you need to prepare fewer billings per month.
- C. Better, because a single, good credit risk means healthier cash flow.
- D. Not a good idea, because you will depend too heavily on a single source of income.

11. Unprofitable work is defined as:

- A. A job that doesn't produce an acceptable level of income.
- B. A job for which income is not classified in your books.
- C. A job that is not reported for tax purposes.
- D. All of the above.

12. The distinction between sales and cash receipts is:

- A. Sales include all sales of all kinds, but cash receipts show losses.
- B. Sales include only charge sales, but cash receipts show cash sales.
- C. Sales include all sales, but cash receipts show the money that came in.
- D. There is no distinction — they are the same thing.

13. When analyzing your monthly cash receipts, a job breakdown might include a column called All Other, which is used for:

- A. Reporting income that you forgot to identify with a job number.
- B. Reporting one-time, non-recurring income.
- C. Reporting loans and miscellaneous receipts that are not actually income.
- D. Reporting retainage only.

14. The calculation of a ratio between gross income and net profits:

- A. Is not relevant in identifying profitable lines of work.
- B. Helps your accountant to identify percentage-of-completion adjustments.
- C. Helps in setting up your advertising budget.
- D. Shows how returns vary from one job to another, helping you identify varying levels of profitability.

15. Good cash budgeting procedures:

- A. Show you exactly what profits you'll have in the future.
- B. Guarantee net profits and eliminate all losses.
- C. Serve as guidelines for making informed decisions.
- D. Are historically interesting, but only useful when you need to apply for a loan

Sales Planning

The successful builder seeks profits, not simply volume, when taking on more work or looking for new lines of business. Volume alone doesn't necessarily produce enough profit to justify the activity. If profits weren't your primary consideration, you would go after all the volume you could handle. But the *quality* of your sales volume, not the amount, is the key to higher profits.

Low-profit volume never adds to the growth of an operation. Instead, it saps income, ties up working capital and equipment, and demands time and energy that you could devote to more profitable projects. You want to avoid low-yield jobs when you consider new types of work. So you need a thorough knowledge of your own current and past yields and a reliable estimate of the risks and potential profits in new work you're considering.

A builder who knows his market will be more successful than one who takes on new ventures without careful planning. Know at least as much about the new field as your competition. Gather facts before you commit yourself. Breaking into a new construction service, product line, or project type is often the only way to grow. But first ask questions and get answers that satisfy you. Find out if that new market is really the one for you.

■ Before You Take on New Kinds of Work

Here are the questions you should ask before you take on a new type of work. They might seem obvious from a practical viewpoint, but think of their accounting and financial consequences, too.

- What is the competition like?
- What is the demand for this type of work?
- Is the market speculative and how much risk is there?
- How much cash will you have to tie up?

- Will you have to lease or buy special equipment or machinery?
- Is your current labor force adequate? Do you have people who are qualified for the work required?
- What portion of total sales will the new work represent? Of total gross profits? Of total net profits?
- What is the estimated return on the investment? Compare this to your current return.

Look closely at projected gross profits and net income in the new market. What if you estimate that a new line will produce large volume but a small percentage of your total profits? Then your yield on the investment will be smaller than if the volume were smaller and the profit were greater.

Consider your commitment of time, labor, cash, and equipment in the new work. Will you still be able to compete in your established line — the one that produces a higher yield? Or will the low yield of the new line drop your overall yield and put a drain on your operation?

Suppose that a few customers would account for the bulk of your new volume or profits. Consider the effect of a single large bad debt on your income and cash flow. Think about the loss of a major account. Like Johnson Construction in Chapter 6, many small accounts under “Repairs and Improvements” may add up to the largest single portion of your volume and profits. In this case you could absorb a few bad

debts or customer losses. But if you committed your operation to three large accounts in a new line, could you afford delayed payments on a third of your new business?

Compare your estimates on the new work to a standard or goal. This should be what you expect as a result — the yield on your investment, the net profit of the new line. The higher your risk, the higher the yield should be. The lower the risk, the lower the yield can be to offset it. If you have to commit a lot of your available working capital to finance equipment for the new line, your possible profits should be high enough to give a good yield on that investment. Instead, you may want to take smaller risks in other work where you already have adequate equipment. Often this means a smaller yield.

■ Analyze the Risk

Look at Figure 7-1. Assume that your company has a volume of \$250,000 per month or per year. That volume is represented by the dark horizontal line. The horizontal line at the bottom of the figure measures the assets you must commit to perform the work you do. If your volume remains the same, the commitment of additional time, money and equipment means that the risk of a large loss grows greater. That doesn't

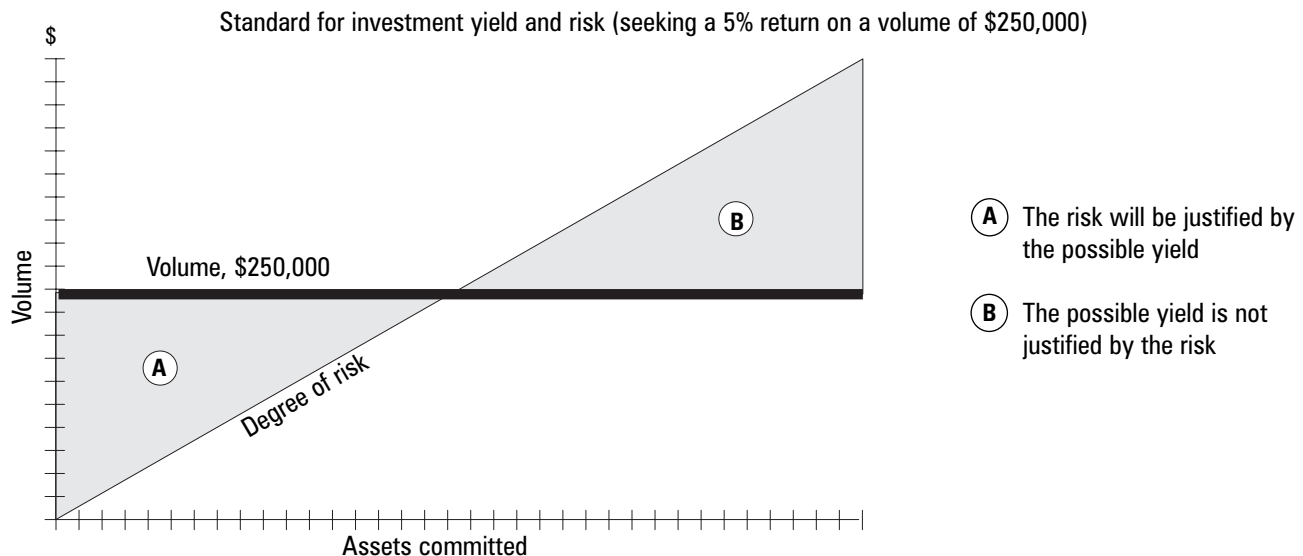


Figure 7-1
Analyzing your risk

Historical Income Statement by Product
Based on an assumed volume of \$250,000

	Total	Bid Contracts	Repairs and Improvements	Material Sales	All Other
Gross Sales	\$250,000	\$100,000	\$90,000	\$50,000	\$10,000
Direct Costs	137,500	55,000	49,500	30,000	3,000
Gross Profit	112,500	45,000	40,500	20,000	7,000
Selling Expenses	56,250	24,000	18,000	9,500	4,750
Selling Profit	56,250	21,000	22,500	10,500	2,250
Fixed Overhead	40,000	16,000	14,400	8,000	1,600
Net Profit	\$16,250	\$5,000	\$8,100	\$2,500	\$650
Yield Ratio	1:15	1:20	1:11	1:20	1:15

Figure 7-2
Income statement by product

necessarily mean that your business is less profitable. High-risk business may be very profitable business. But you should be aware of the increased risk before you commit yourself and your business.

If you see an opportunity to expand, but know that more risk is involved, make sure the potential for profit outweighs the associated risk. Notice on Figure 7-1 that you can commit additional assets without increasing your risk if your volume grows proportionately to your assets. Raising the volume line decreases area B and increases area A if the committed assets remain the same. If the volume line climbs proportionately to the increase in assets committed, the size of areas A and B will remain the same.

Analyze your present business on paper before you decide on a new venture. Prepare an income statement as in Figure 7-2, which assumes a volume of \$250,000. This gives you yield, volume, and profit information you can use to help decide if a potential new market measures up to your yield standards. Base your product and service breakdowns and yields on five-year averages, since this absorbs large variations within a reasonable time span. Round to thousands of dollars. The subtotal for selling profit distinguishes the before-overhead results from the bottom line. Of course any method of breaking down fixed overhead will be arbitrary. But this extra piece of information provides more data you can use to compare new business to your present operation.

The ratio at the end of each section shows net profits to gross sales. This is the *yield ratio* explained in the last chapter. The repairs and improvements category shows the best yield here, but this may be seasonal. Johnson Construction couldn't support itself on that line alone and needs the additional work it does to offset the slow months' decreases. The bid contracts and material sales categories yield the minimum 5 percent, but account for 60 percent of the total volume.

Figure 7-3 shows the same information as Figure 7-2, but expressed in percentages. Gross sales is 100 percent and all figures are expressed as a percentage of gross sales. Bid contracts and repairs and improvements have the highest gross profit (each 45 percent), but the repairs and improvements category alone has the highest selling profit and net profit. Again, Johnson Construction couldn't survive by doing repairs and improvements alone. Not only is it a seasonal line, but the company's other building activities feed it business. A good deal of repair and improvement work comes from contacts in other lines.

Selling expenses for *All Other* are 47.5 percent because of higher automotive expenses for hauling and freight in this line. Truck and auto expenses aren't classified as direct costs, but as selling expenses. This distinction is helpful when you analyze the profitability of your existing work and compare this data to new markets.

Percentage Historical Income Statement by Product

	Total	Bid Contracts	Repairs and Improvements	Material Sales	All Other
Gross Sales	100.0%	100.0%	100.0%	100.0%	100.0%
Direct Costs	55.0	55.0	55.0	60.0	30.0
Gross Profit	45.0	45.0	45.0	40.0	70.0
Selling Expenses	22.5	24.0	20.0	19.0	47.5
Selling Profit	22.5	21.0	25.0	21.0	22.5
Fixed Overhead	16.0	16.0	16.0	16.0	16.0
Net Profit	6.5%	5.0%	9.0%	5.0%	6.5%

Figure 7-3
Income statement by percentage

From Figure 7-3, Johnson Construction determines that its lowest acceptable yield is 5 percent. Any new market they consider can't have an estimated yield below that. Additional auto and truck expense would require that Johnson Construction aim for a higher selling profit to offset the higher overhead expense.

Johnson Construction has compared its five-year yield data to estimated high and low figures for the new business it considers taking on. This establishes

high and low yield limits for the company, including the new business. You might want to add a small percent to the selling profit or the net profit to allow for errors.

Johnson Construction applies its yield data to a potential new market and sets yield limits that would be acceptable overall. See Figure 7-4. These are the company's yield assumptions, including the new business. The *Present Results* column shows the

Summary of Market Assumptions
Based on an assumed volume of \$250,000

	Present Results		High Expectation		Low Expectation	
	Dollar amount	%	Dollar amount	%	Dollar amount	%
Gross Sales	\$250,000	100.0	\$250,000	100.0	\$250,000	100.0
Direct Costs	137,500	55.0	112,500	45.0	162,500	65.0
Gross Profit	112,500	45.0	137,500	55.0	87,500	35.0
Selling Expenses	56,250	22.5	68,750	27.5	35,000	14.0
Selling Profit	56,250	22.5	68,750	27.5	52,500	21.0
Fixed Overhead	40,000	16.0	40,000	16.0	40,000	16.0
Net Profit	\$16,250	6.5	\$28,750	11.5	\$12,500	5.0
Yield Ratio	1:15		1: 9		1:20	

Figure 7-4
Summary of market assumptions

minimum acceptable level. This is the current yield based on a five-year average. The *High Expectation* column shows the figures for the most desirable level that could realistically be expected, including the new business. The *Low Expectation* column shows the lowest acceptable yield with the new business, assuming that risks and time commitments were also minimal.

Allow for errors in your estimate by including an error factor — a small amount added to the selling profit or the net profit. When you expand into the new

work, stay within the acceptable yield. You define your goals and limits when you establish high and low standards by which you will accept new business.

Chapter 8 discusses the other aspect of sales planning: deciding whether to stay in or get out of a current line of work. It can be a good move to abandon a product or service if you're losing money. You need complete analysis by the job and by job type for sales, direct costs, and expenses. Taking on new types of work can be a big boost or a drain. Similarly, getting out of certain types of work may have surprising results.

Test Questions:

1. Successful builders seek:

- A. Volume as a priority over profits.
- B. Profits as a priority over volume.
- C. Volume of any and all kinds.
- D. Any of the above, depending on the circumstances.

2. Low-profit volume is characterized by:

- A. Failure of the organization to grow.
- B. Better growth than is possible with high-profit volume.
- C. Low-level overhead.
- D. Better overall management.

3. When considering new lines of business, sales planning should include an analysis of:

- A. The competition for the same business.
- B. Whether or not you can force the numbers to work on paper so you can get an expansion loan from the bank.
- C. The number of employees currently able to take on more work.
- D. All of the above.

4. Yield on investment is important when expanding your lines of business because:

- A. Your commitment of time and capital will be higher for less return.
- B. You might not be able to continue competing effectively in existing lines of business if you expand.
- C. The risks might not justify the lower potential rewards.
- D. All of the above.

5. High-risk lines of business may be:

- A. Highly profitable in all cases.
- B. Highly profitable but, perhaps, not worth that extra risk.
- C. Not very profitable in virtually every case.
- D. Necessary for a well-organized and diversified organization.

6. By setting a minimum acceptable yield, you:

- A. Exclude many possible ways to expand.
- B. Might overlook some potential money-makers in the new markets.
- C. Set a standard for evaluating possible ways to expand business.
- D. Overlook the obvious and track the wrong indicators.

7. One line of business yielding an exceptionally low rate:

- A. Has to be accepted as part of being in business.
- B. Could drag down your overall return and affect profitability.
- C. Isn't a big problem if it's only a small segment.
- D. Probably indicates an error in assignment of expenses among different lines.

8. One method for preparing market assumptions is to:

- A. Try and pin down the closest likely future outcome, and then do all you can to make it happen that way.
- B. Hire a professional forecaster.
- C. Prepare two possible outcomes, high and low expectation; then try to achieve results within the range.
- D. Do the most optimistic budget you can and hope for the best.

9. Selling expenses differ from fixed overhead in that:

- A. Selling expenses never vary.
- B. Selling expenses may vary by volume.
- C. Overhead expenses may vary to a greater degree than selling expenses during high-volume periods.
- D. They are overhead expenses incurred by salespeople.

10. When selling expenses do vary, management should:

- A. Fire the abusers and hire more responsible employees in the future.
- B. Analyze the actual expenses versus budget to find out where the problems exist.
- C. Accept it as unavoidable, since budgets don't really work to control any expenses.
- D. Reduce sales volume in the future to drive down the level of selling expenses.

11. Volume can be defined as:

- A. Another word for profit.
- B. The amount of sales dollars.
- C. The gross profit you earn.
- D. The revenue by line of business.

12. For sales planning purposes, "risk analysis" means:

- A. Buying the right amount of insurance.
- B. Determining your personal liability for a line of business.
- C. Comparing potential profit to the risk of expanding.
- D. None of the above.

13. A particular line of business is considered favorable if its net profit is:

- A. Equal to or higher than overall net profit.
- B. Equal to or lower than overall net profit.
- C. Above zero, regardless of the percentage of profit.
- D. Acceptable at the gross profit level, even if it shows a net loss.

14. A new line of business should be studied from the point of view of:

- A. Competitive aspects.
- B. Volume and profit potential.
- C. Seasonal factors.
- D. All of the above.

15. You can define a range of market assumptions by:

- A. The exact sales you reasonably expect, without exception.
- B. Comparisons between present results and high/low expectations.
- C. A complete analysis of general expenses allocated to each line of business.
- D. A study beginning with the desired profit, and building from bottom to top.

Planning for Profits

It's wise to consider abandoning any part of your business that doesn't produce profits. Many successful builders move in and out of markets as required by circumstances. But you must be able to predict the effect of any change before you make it. Your books and records will be invaluable in helping you make this decision.

If one type of work that you do — or an area where you do it — is losing money, that saps profits from your total business. It drains off time, money and assets while dragging down overall performance. For example, assume that your operation is divided between three types of work. You suspect that two of these are money-makers and the third is a profit drain. Your total yield may be cut in half if the figures look like this:

Type of Work	Volume	Net Profit	Yield
A	\$100,000	\$8,000	8%
B	100,000	5,000	5%
C	100,000	(4,000)	(4%)

The combined yield of work A and B is 6.5 percent: Because work in the C area is losing money, it drags the total yield down to only 3 percent.

But look carefully at the figures before you start turning down any work. Fortunately, unlike new work you might like to get into, you have plenty of your own figures to help you make your decision. First, you need a profit and loss statement by type of work. But the net results by business type don't really tell the whole story.

Avoiding low-profit work doesn't necessarily cut your overhead proportionately. There are fixed overhead costs, such as rent, which don't necessarily decrease when you reduce your volume. You have to make some estimate of what costs will be reduced by abandoning certain types of work. To do this, allocate fixed costs among the types of jobs you do. The goal is to break down all costs and expenses by responsibility: in what phase of business does the specific expense occur? You can find fault with any method of assigning these expenses, because there is no totally accurate way to do it.

Graham Construction Company
Profit and Loss Statement
For the Year Ended December 31, 20__

	Total	Commercial	Residential
Gross Income	\$348,216	\$184,728	\$163,488
	100%	53%	47%
Direct Costs	193,401	77,599	115,802
Gross Profit	\$154,815	\$107,129	\$47,686
	100%	69%	31%
Operating Expenses			
Office Salaries	\$16,400		
Rent	9,200		
Depreciation	9,115		
Utilities	7,118		
Operating Supplies	3,691		
Office Supplies	1,284		
Insurance	8,411		
Automotive	7,700		
Union Welfare	31,416		
Taxes and Licenses	14,800		
All Other	8,280		
Total Expenses	\$117,415	\$62,230	\$55,185
		53%	47%
Net Profit	\$37,400	\$44,899	\$(7,499)
Yield	10.7%	24.3%	-4.6%

Figure 8-1
Profit and loss statement

Allocations are discussed further in Chapter 15. For now, be aware that no “general” method of assigning expenses is perfect.

Direct costs are more easily assigned because with good records you can identify the related area of income for each direct cost item.

■ Analyzing the Relative Profits

Figure 8-1 is a profit and loss statement for Graham Construction Company for one month. This builder splits his business into commercial and residential lines. Commercial work includes all bid contracts. Graham is a specialist in office building remodeling and generally has several large jobs going. The steady volume makes this type of work desirable. Graham’s management knows months in advance what a large part of its income and expenses will be. And because the line of business involves a few large contracts, the related costs and expenses are easier to control than in most other lines.

The residential category on the Graham statement includes all material sales, repairs and improvements, freight, hauling, and other work sold directly to homeowners. Graham Construction obviously does better with its commercial construction. Figure 8-1 shows that Graham might in fact be better off without the residential line of business. You can see that net profits for commercial work are \$44,899, a 24.3 percent yield. Abandoning the residential business would save a large part of the bookkeeping volume, management time, and daily telephone calls.

The Graham Company doesn’t have a good method for allocating expenses. All expenses are assigned on the same basis as gross sales. If they would break out selling expenses separately as Johnson Construction does, it would be a more accurate way of allocating expenses.

Graham realizes the shortcomings of its by-line statement. For example, if operating expenses had been split on the basis of gross profit, the results would have been very different. But the Graham Company decided to analyze the effect of getting out of residential work by preparing the statement shown in Figure 8-2.

Graham used conservative assumptions in preparing this summary. Abandoning almost half of the operation’s volume seems to be a drastic move. The following estimates were made:

- Office salaries (clerical help), taxes and licenses would be cut in half without the residential line.
- 60 percent of operating supplies and union welfare expenses would be cut.
- 25 percent of office supplies, insurance, and automotive expenses would be cut.

These estimates are based on the builder’s realistic appraisal of expenses in his operation. He also relied on his familiarity with his business.

The problem Graham would face in leaving the residential market is apparent. Figure 8-2 shows that the 24.3 percent yield on commercial work in a consolidated operation falls to a 16.6 percent yield if only commercial work is taken on. This shows two things. First, the basis used for allocating operating expenses isn’t as accurate as it could be. A better division would have been based on gross profit. But this is still only a broad estimate. Second, abandoning residential work wouldn’t increase profits. While the residential work isn’t a money maker, it does help carry the business overhead.

Graham Construction Company
Profit and Loss Analysis by Line of Business
For the Year Ended December 31, 20__

	Total	Less: Residential	Commercial Only
Gross Income	\$348,216	\$163,488	\$184,728
Direct Costs	193,401	115,802	77,599
	100%	60%	53%
Gross Profit	<u>\$154,815</u>	<u>\$47,686</u>	<u>\$107,129</u>
Operating Expenses			
Office Salaries	\$16,400	\$8,200	\$8,200
Rent	9,200	—	9,200
Depreciation	9,115	—	9,115
Utilities	7,118	—	7,118
Operating Supplies	3,691	2,215	1,476
Office Supplies	1,284	321	963
Insurance	8,411	2,103	6,308
Automotive	7,700	1,925	5,775
Union Welfare	31,416	18,850	12,566
Taxes and Licenses	14,800	7,400	7,400
All Other	8,280	—	8,280
Total Expenses	<u>\$117,415</u>	<u>\$41,014</u>	<u>\$76,401</u>
Net Profit	<u>\$37,400</u>		<u>\$30,728</u>
Yield	10.7%		16.6%

Figure 8-2
Profit and loss analysis by line of business

This doesn't mean that Graham can't afford to leave the residential market. But the move must be the result of careful planning. If Graham really doesn't want to be in that business, he must either seek out new markets to replace the residential business or settle for a reduced profit.

Remember that the present combined yield is 10.7 percent and the commercial line is estimated to yield 16.6 percent. In Chapter 7, I pointed out that a higher yield on volume is always more desirable. Graham Construction might want to consider phasing out of residential work as it replaces lost volume with more commercial work. A realistic goal would be to hold profits of \$37,400 (as in Figure 8-1) on a reduced volume. When the profits climb to that level, the company could consider abandoning residential work completely. The result should be a smaller volume of business with no cut in profits.

At a profit ratio of 16.6 percent, Graham Construction would have to increase its gross to about \$225,000 to reach \$37,000 in monthly profits. This is

about 22 percent more than the current volume. Actually, Graham's fixed overhead wouldn't vary, so an increase of somewhat less than this could bring the same results. Graham must consider whether it can increase volume 22 percent in a competitive market. There might not be enough work available at attractive margins in their market area.

If Graham did decide to go after a bigger share of the commercial market, it should watch costs and expenses carefully during the transition period. You can calculate the required volume by starting with the monthly profit assumption:

Net Profit Goal	\$37,400
Fixed Overhead (Rent, depreciation, utilities, and all other)	35,000
Estimated Selling Expense	<u>75,000</u>
Gross Profit Goal (69% of sales)	147,400
Sales Volume Goal (Increase of 16%)	<u>\$213,623</u>

Summary of Successful Volume

Description	A	B	C	D
Sales	\$50,000	\$100,000	\$150,000	\$200,000
Direct Costs	<u>27,500</u>	<u>55,000</u>	<u>82,500</u>	<u>110,000</u>
Gross Profit	<u>22,500</u>	<u>45,000</u>	<u>67,500</u>	<u>90,000</u>
Selling Expenses	13,750	27,500	41,250	55,000
Fixed Overhead	<u>6,250</u>	<u>11,250</u>	<u>15,000</u>	<u>15,000</u>
Total Expenses	<u>20,000</u>	<u>38,750</u>	<u>56,250</u>	<u>70,000</u>
Net Profit	<u>\$2,500</u>	<u>\$6,250</u>	<u>\$11,250</u>	<u>\$20,000</u>
Yield	5.00%	6.25%	7.50%	10.00%

Figure 8-3
Summary of successful volume

Here's how he calculated the Estimated Selling Expense (based on Figure 8-1):

Total Operating Expense	\$117,400
Less Fixed Overhead	35,000
Direct (job-related) Overhead	<u>82,400</u>
69% of Direct Overhead (Percentage of commercial to the total)	56,856
Plus 22% of Direct Overhead (Estimated increase in direct overhead)	18,128
Total Estimated Selling Expense	<u>\$ 74,984</u>

There's one last consideration. Fixed overhead can increase or decrease with significant differences in volume. Going into new markets may require more rented space. More equipment and machinery would increase depreciation expenses. Some other expenses would probably increase as well. A decrease in volume might allow you to cut some fixed expenses.

Figure 8-3 shows favorable volume increases assuming direct costs at 55 percent of gross receipts. Profits vary with volume and expense levels. Figure 8-4 shows unfavorable volume increases and illustrates what can happen when you don't control direct costs. Column E shows direct costs calculated at 55 percent of sales. Column H has direct costs at 70 percent of sales. This is the kind of trap that Graham Construction must avoid if they decide to increase

their commercial business. The degree of success depends on how well they control costs and expenses.

Figure 8-5 compares the yields for the favorable and unfavorable volume increases in Figures 8-3 and 8-4.

The Relationship Between Volume and Profit

It's important to understand the relationship between volume and profit. You should recognize this relationship when you decide to concentrate your efforts in one market and abandon another. The margin of profit increases with volume if costs and expenses are a declining percentage of gross receipts. Without that advantage, the profit margin will remain the same with increased volume, or may even decrease.

Controlling expenses means both keeping increases to a minimum and knowing what will happen when new markets are acquired or old ones are abandoned. With a reduced volume, Graham Construction would have difficulty maintaining its profit margin. Some of those fairly inflexible expenses would suddenly represent a much higher percentage of total sales. With a growing volume, it's easier to hold expenses to a lower percentage because those same fixed expenses are slow to rise at first.

Summary of Unsuccessful Volume

Description	E	F	G	H
Sales	\$50,000	\$100,000	\$150,000	\$200,000
Direct Costs	27,500	60,000	97,500	140,000
Gross Profit	22,500	40,000	52,500	60,000
Selling Expenses	13,750	24,250	31,500	38,000
Fixed Overhead	6,250	11,250	15,000	15,000
Total Expenses	20,000	35,500	46,500	53,000
Net Profit	\$2,500	\$4,500	\$6,000	\$7,000
Yield	5.00%	4.50%	4.00%	3.50%

Figure 8-4

Summary of unsuccessful volume

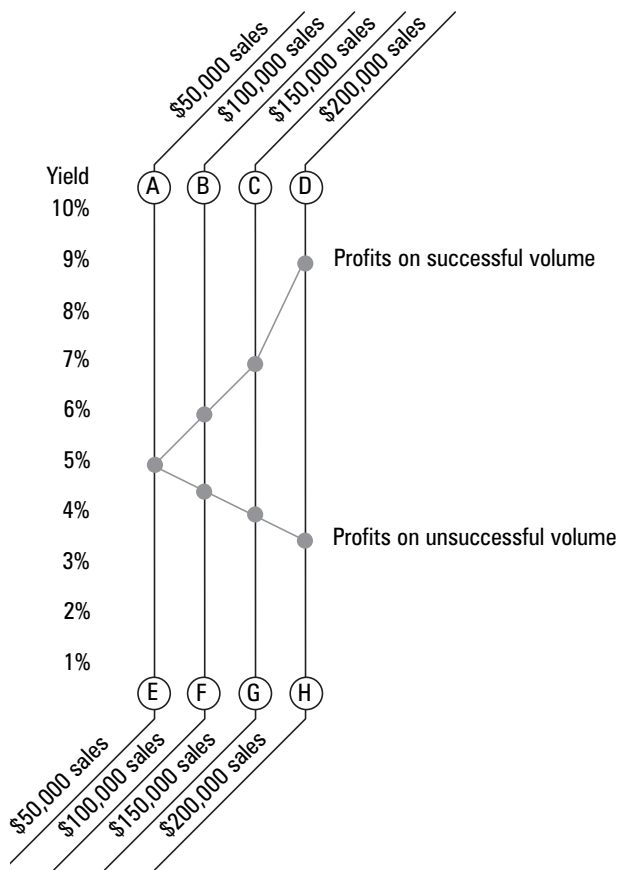


Figure 8-5

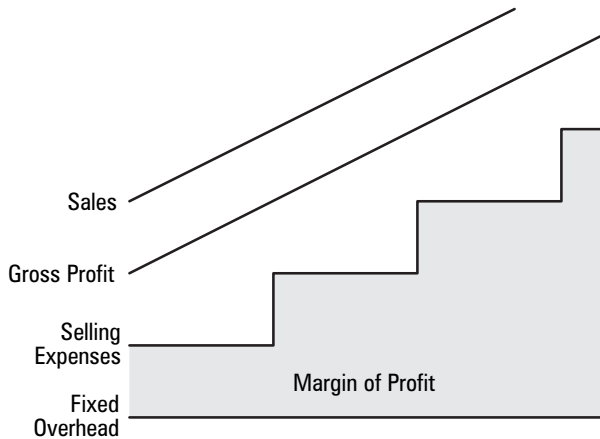
Comparative yields: successful and unsuccessful volume

Figure 8-6 illustrates the relationship between volume and profit. A constant overhead expense (the horizontal line) represents a smaller percentage of sales with higher volume and a larger percentage of sales with smaller volume. In short, success in increasing the margin of profit depends on control of fixed expenses.

Selling expenses usually rise in steps and are related to business volume. While selling expenses tend to follow sales volume, they're even more controllable than fixed overhead. Supplies, insurance, automotive expense, and office salaries can be budgeted and controlled. As volume and cash profits increase, some builders tend to relax their control over selling expenses. But you can only maintain the standard you have set for yourself if you keep them under control.

Guidelines for Dropping Low-Profit Business

- There is no precise way to allocate expenses among your various sales categories. Even the most controlled allocation method involves some judgment. Decide whether the basis you use for allocation is accurate by comparing the yields you develop for each part of your business.

**Figure 8-6***Successful volume and the margin of profit*

- Don't be too critical of seemingly low-yield markets until you calculate the effect of doing without that volume. Your true profit might be higher than you think.
- Like getting into a new market, abandoning a market requires careful research, planning, and analysis. Retreat from unprofitable markets, but only after you're sure they're truly unprofitable, likely to remain so, and are a drag on your business.
- Decide how to replace lost volume. The growth of your business depends on the availability of work and the competition for it. Know beforehand that you'll be able to take over enough of your market to make up for lost volume.
- Map out a plan for replacing abandoned volume. Include a volume goal. Begin with the profit you want and figure back to the volume you need. Then phase out of the old, low-yield market and into the new volume you have budgeted. All through this process, carefully control your direct costs, selling expenses, and fixed overhead.
- Keep in mind the relationship between successful volume and the margin of profit. Control selling expense and direct costs as increases in volume occur.
- Check your yield from time to time. This is the best indicator of the effectiveness of your controls. Profit margins that remain unchanged or that decrease while volumes increase are the result of uncontrolled changes in costs and expenses.
- Be realistic. Don't play with the numbers just to make your plans work out to expectations. The purpose of profit planning is to come up with a realistic estimate, not to justify a foregone conclusion.
- Be willing to change your plan if your previous profit forecast doesn't work out. Remember, your market environment is constantly changing. Your planning needs to change in order to keep up with the market.
- Keep your original objectives in mind. There's no point in pursuing new markets (or keeping old ones) you really don't want. After all, *you're* in charge and should remain there. When you find yourself doing things you don't want to do, ask yourself why you started your own business in the first place.
- Be wary of the concept of "acceptable losses." You've probably heard of this idea — that it's okay to lose money initially because you'll make it up with future profits. That may be true. But it's better to start making profits right away, if possible. And few of us can afford two or three years of losing money.

Test Questions:

1. Getting rid of low-yielding or losing lines of business isn't always as simple as it might appear at first, because:

- A. Customers depend on you staying in business even if you're losing money.
- B. The net loss might include absorption of some overhead that will remain anyhow, so the net loss might not be as severe as it looks.
- C. Your employees won't feel secure when you start cutting back on work.
- D. You should instead try to make those lines of business profitable.

2. Analysis is most accurate and dependable when done:

- A. On the basis of net profit, with fixed overhead assigned to each line on a percentage of gross basis.
- B. On the basis of gross sales only.
- C. On the basis of gross profit, since only direct expenses can be specifically identified by job.
- D. On any basis as long as it is consistent.

3. The most accurate way to allocate expenses is by:

- A. Assigning selling expenses by job, and then allocating overhead on the basis of gross profit percentage.
- B. Assigning overhead and selling expenses strictly on the basis of gross profit.
- C. Assigning overhead and selling expenses on the basis of sales, because gross profit varies by line of business.
- D. Making absolutely no distinctions between selling and fixed overhead expenses.

4. Volume described as "unsuccessful" is characterized by:

- A. Falling volume during periods of steady profits.
- B. Rising gross margins but declining profits.
- C. Rising dollar amount of profits but declining yields.
- D. Rising volume, gross margin, profit, and yield rates.

5. Volume described as "successful" is characterized by:

- A. Profits rising in amount and yield.
- B. Profits rising solely as the result of higher direct profit and falling overhead.
- C. Leveling off of sales and profits.
- D. Leveling off of gross margins during periods when expenses are being cut drastically.

6. Fixed overhead expenses:

- A. Are always fixed and, with proper controls, will never rise.
- B. May rise when significant changes in volume and markets also occur.
- C. Will rise only when controls are completely lacking.
- D. Are "fixed" only because they are under some form of contract.

7. Selling expenses:

- A. Tend to rise with increased volume, but not to the same degree of direct costs.
- B. Should remain steady when volume rises, since they are expenses occurring only before actual volume hits the books.
- C. Are actually direct costs.
- D. Can usually be cut back by careful controls over staff habits.

8. Proper control over expenses requires:

- A. Knowing what to expect when you expand into new markets.
- B. Reviewing expenses as they occur, and taking steps to reduce unnecessary increases.
- C. Placing internal controls in the company to ensure that your margins can be reached.
- D. All of the above.

9. Precisely allocating fixed overhead by line of business:

- A. Is possible but only with very detailed analysis and diligent study.
- B. Is possible as long as you are able to trace each expense to its origin.
- C. Is impossible as long as crew members don't fill in receipts completely.
- D. Is impossible because, in fact, overhead expenses are not directly related to specific lines of business.

10. When you get out of a line of business, lost volume:

- A. Is better lost because the yield was too low.
- B. Can be replaced with a careful plan and with an understanding of the market.
- C. Should not be replaced unless you have a large infusion of capital.
- D. Should be replaced by taking a bigger share of remaining markets away from your competitors.

11. The factors affecting profits include:

- A. Both volume and expense levels.
- B. Volume only.
- C. Volume and direct costs only.
- D. Community influence.

12. Lines of business that are losing money should be:

- A. Abandoned immediately without hesitation.
- B. Studied to ensure that your allocations are accurate.
- C. Kept going to serve as a tax writeoff.
- D. Modified by raising prices so that profits can be earned.

13. When deciding to abandon an unprofitable line of business, it's practical to:

- A. First have a large cash reserve in the bank.
- B. Raise prices on other lines of business to compensate.
- C. Incorporate first to avoid higher taxes.
- D. Seek out new markets to replace lost business.

14. The relationship between volume and profit is:

- A. Part of a marketing theory and does not directly affect business projections.
- B. The key to producing profitable lines of business.
- C. Not related to costs and expenses.
- D. None of the above.

15. The margin of profit is different from the dollar amount of profit because the margin of profit:

- A. Is not reported for tax purposes, as it's not actual profit.
- B. Is a reserve, whereas the dollar amount goes into the bank.
- C. Is a percentage, and allows you to compare the relative profitability between lines of business.
- D. Is actually borrowed money, but the dollar amount is real.



Costs and Expenses

Check Writing and Recording

Accounting for Materials

Payroll Accounting

Overhead Expenses

Equipment Records

Cash Budgeting

Cost and Expense Records

Accounting for Costs and Expenses

Petty Cash Funds

Balancing the Checking Account

Accounting for Estimates

Check Writing and Recording

You can't control your costs and expenses effectively if you don't follow good check writing and recording procedures. The information in your check register must be complete and informative. Remember, your cost analysis is only as good as the source document — your check record.

Obviously, you must have an effective check-writing system for your business. But even that's not enough. You also have to decide how many accounts to maintain. Multiple checking accounts can save time, but they can also become a headache.

This chapter is intended to help you decide on the check-writing system most appropriate for your business. Your checkbook or check register records your costs and tells a lot about your business. You can also use your check records to calculate your future cash flow and profits. Make sure that you're getting all the information you need from your check register.

This chapter explains the controls and procedures you should use in writing and recording checks, including the checkbook itself, the check register (the summary accounting document that classifies your payments in a logical manner), and the handling of accounts payable in the check-writing process. Other problems covered include the proper control of multiple checking accounts in one business, and how to handle checks when more than one business runs from the same office.

■ Maintaining the Checkbook

It needn't be time-consuming, nor is it difficult to keep a complete and accurate record of checks. But if you neglect the job, you'll lose useful information — or lose time when you have to reconstruct the records. Your financial reports, statements, and forecasts will be of little value if you don't know where your money is spent. The time required to create and maintain

The figure displays three typical checkbook stubs, numbered 249, 250, and 251. Each stub is designed for recording check transactions and includes a check form. The left side of each stub is a ledger with columns for 'BAL BROTT FORD', 'DEPOSITS', 'TOTAL', 'THIS CHECK', 'OTHER', 'TAX DEDUCTIBLE', and 'BALANCE'. The right side is a check form for 'JOHNSON CONSTRUCTION CO., 412 WARD AVENUE, MIDFIELD, USA', payable to 'MIDFIELD BANK, 380 EIGHTH ST., MIDFIELD, USA'. The check number is 0012345678.

Figure 9-1
Typical checkbook stubs

a well-organized, controlled check-recording system will pay off immediately if you've been negligent in recording checks in the past.

Start by writing out complete names and descriptions for each check and carry a balance of payments by account. This will:

- Support summary entries recorded elsewhere
- Aid you in balancing your bank account
- Give you detail needed for adjustments to accrue or defer costs and expenses
- Provide records for analysis and forecasting

You need a check summary to update your general ledger each month. You can't complete that job until you've listed all checks and reconciled your account with your bank statement. Balancing your bank account requires that you account for checks cleared as well as checks outstanding. Rather than going through your check stubs, prepare a check listing that gives you all the banking information you need. There's more on this in Chapter 18.

Chapter 2 explained how income is deferred or accrued under both the percentage-of-completion and

completed-contract accounting methods. You also have to adjust related costs and expenses. The detail needed for adjusting sales is minor when compared to the adjustments you have to make on the money you pay out. Adjusting costs is more complex because there are many cost categories associated with each job. Good, detailed check stubs on payments make for more accurate financial statements and forecasts and simplify handling of accrued and deferred expenses.

The check stub and the canceled checks are supported by *source documents*, the invoices or receipts that cause the check to be written in the first place. Payment summaries found elsewhere in your books (general ledger accounts or line-by-line summaries on financial statements) can all be traced back to checks and their supporting source documents. This creates an "audit trail." So the check stub or copy must have clear, concise information.

Figure 9-1 shows check stubs in a checkbook. There are many checkbook styles. If you use a pegboard system, your checks don't look like Figure 9-1. With the board method, there is no check stub at all. We'll discuss pegboard checks later.

What to Record

Here's the basic information you must record when you write a check, regardless of the format of your check system:

- The check number
- The date
- Who was paid
- What the payment was for (or an account number)
- The amount of the check

Checks include a pre-printed number on the check and the stub (unless you'll print them on your computer). If your check stubs don't include a pre-printed number, be sure to write the check number on each stub.

Once you write and mail a check, the stub becomes the record of what the check was for and the amount of the check. The reason for payment could be a coded number, a written description, or an invoice number. You're probably familiar with your regular vendors and don't need to write a complete description on the stub. The company name tells the whole story. But what if someone who's completely unfamiliar with your business needs to analyze your checkbook?

There will be times when others must look at your checkbook. Your accountant may hire a new assistant. Or you may need a statement for a loan application audited by an outside accounting firm. You could be subject to an insurance or tax audit. Make sure you document each check so no further explanation is required. Complete each check stub on the assumption that the next person to see it won't know anything at all about your operation.

Figure 9-1 shows a series of horizontal lines between the stub and the check itself. Not all checkbooks are exactly like this, but all have some area for keeping a running balance. Use this section to bring a balance forward from the previous page and subtract the amount on the check. Record deposits and increase your balance in this column so you know what the current cash balance is.

Avoid math errors in bringing forward the balance by checking each page backwards for accuracy. From the bottom, *add* all checks and *subtract* all deposits. The total should agree with the amount carried forward at the top of each page. This will save you time when you balance your bank account each month and give you more confidence in the balance you're carrying. Make it a habit to check each page before you go on to the next.

Adjustments to Make

Keep your account as current as possible. Add or subtract any adjustments as soon as you find out about them. These include math corrections and accounting for bank service charges and returned checks.


Here are the types of adjustments you can expect to make when you balance your account.

- *Bank service charges:* Banks usually charge a monthly fee on checking accounts. It may be called a service charge, handling fee, or activity charge. Some banks charge a set monthly fee; others base their charge on the number of checks, deposits and your average balance. You may not know the amount of the charge until you receive your bank statement. The fee reduces your cash balance.
- *Returned checks:* Checks you've deposited in your account are not always honored by your customer's bank. There may be insufficient funds, the account may have been closed, there could be an unacceptable signature, or a stop-payment order may have been put on the check. Whatever the reason, use a form letter or phone call to find out what the problem is. And don't forget to increase your accounts receivable by the amount of the check. In the meantime, your cash balance must be reduced by the amount of the returned checks.
- *Special charges:* Banks normally charge for printing checks by taking funds directly from your checking account. This is a legitimate business expense and should be recorded in your general ledger. Special charges reduce your cash balance.
- *Automatic payments:* For convenience, you can arrange to have loan payments automatically deducted from your account. You must reduce your account balance for such payments and make appropriate entries to your general ledger. Other types of automatic payments, such as insurance premiums, can also be transferred from your account. These often appear on your statements as debit memos. Since the payments are sent to outside parties, the bank makes the payment by honoring a draft just as though you had written a check. For example, an insurance company could send your bank an authorized draft. Your bank then transfers the funds to the insurance company in your name. These also reduce your cash balance.
- *Overdraft charges:* There will usually be a charge for paying or returning checks written against overdrawn accounts.

- **Error adjustments:** Your bank notifies you about errors they find. For example, if you have a math error on a deposit, the bank will send you either a debit memo (advising you to decrease your balance) or a credit memo (advising you to increase your balance). See Figure 9-2. If you receive a credit memo, *increase* your balance. You're being given credit for more funds. If you receive a debit memo, *decrease* your balance. You're being charged for the amount shown. Banking terminology can be confusing. Charges, debits, and debit memos all reduce your balance. Credits and credit memos increase your balance.
- **Non-bank adjustments:** When you balance your bank account, you may find other required adjustments. You might find your own math or recording errors. Be sure to adjust your balance for these. And occasionally the bank will make a mistake. Don't adjust your balance for these. Instead, call the bank and explain their error. They'll usually acknowledge the correction in writing, and may even prepare a new statement. Balance your account to the corrected statement.
- **Voiding checks:** You might void a check as you write it, or afterwards. Void a check immediately if you make a mistake while completing the check. Simply carry the same balance forward to the next stub and record "void" on the stub of the voided check. But if the check is voided later — for example, when a duplicate payment is returned to you — record an *increase* in your balance to reverse the check. Remember to record the reversal either in a special journal or on your check register so the adjustment is recorded in your general ledger.
- **Stop payments:** Occasionally you write and mail a check and discover later that the payment was a mistake. Or maybe a check is lost in the mail or at the payee's office. It would be foolish to simply write another check. Both payments might be cashed. Instead, stop your bank from making payment on the check. Most banks require that you go to the bank in person to stop payment. Some permit you to process a stop payment by phone or fax. You have to fill out a form with the check number, amount, date paid, payee, and reason for stopping payment. The bank searches its accumulated checks in your account to see whether the check in question has cleared. If it hasn't, they put your stop order into effect and refuse to honor the check if it does arrive. Most banks charge a fee to put a stop payment order on a check. Some also charge another fee if the check is presented for payment. These fees reduce your cash balance.

Figure 9-3 depicts the flow of entries and adjustments in your checkbook. A complete summary of all adjustments (including the ones you find yourself when balancing your bank account) is presented in Chapter 18, Figure 18-4. You can use this summary as a reminder list to ensure that the proper general ledger accounts show the changes. From this summary you can prepare a monthly journal of bank-related adjustments. The journal will also help you balance your cash account in the general ledger.

All changes to your cash account balance should be fully documented. Most of this documentation comes from your bank statements. Your bank account will stay in balance once you establish a good procedure.

CREDIT MEMO			 MIDFIELD BANK <small>MAIN OFFICE</small>
Account Number	Date	Credit Number	
<input type="text" value="0000000000"/>	<input type="text" value=""/>	<input type="text" value="C447627"/>	
Your account has been CREDITED for:			
Date	Adjustment explanation	Amount	
<input type="text" value="3-20"/>	<input type="text" value="Deposit error"/>	<input type="text" value="\$18.00"/>	
Mail To:		<input type="text" value="\$18.00"/>	
Johnson Construction Co. 412 Ward Avenue Midfield, USA		By <u>J. Nathan</u>	


DEBIT MEMO			 MIDFIELD BANK <small>MAIN OFFICE</small>
Account Number	Date	Debit Number	
<input type="text" value="0000000000"/>	<input type="text" value=""/>	<input type="text" value="D898338"/>	
Your account has been CHARGED for:			
Date	Adjustment explanation	Amount	
<input type="text" value="3-16"/>	<input type="text" value="Andrew Menke - check returned (refer to maker)"/>	<input type="text" value="\$62.19"/>	
Mail To:		<input type="text" value="\$62.19"/>	
Johnson Construction Co. 412 Ward Avenue Midfield, USA		By <u>J. Nathan</u>	

Figure 9-2
Bank credit and debit memos

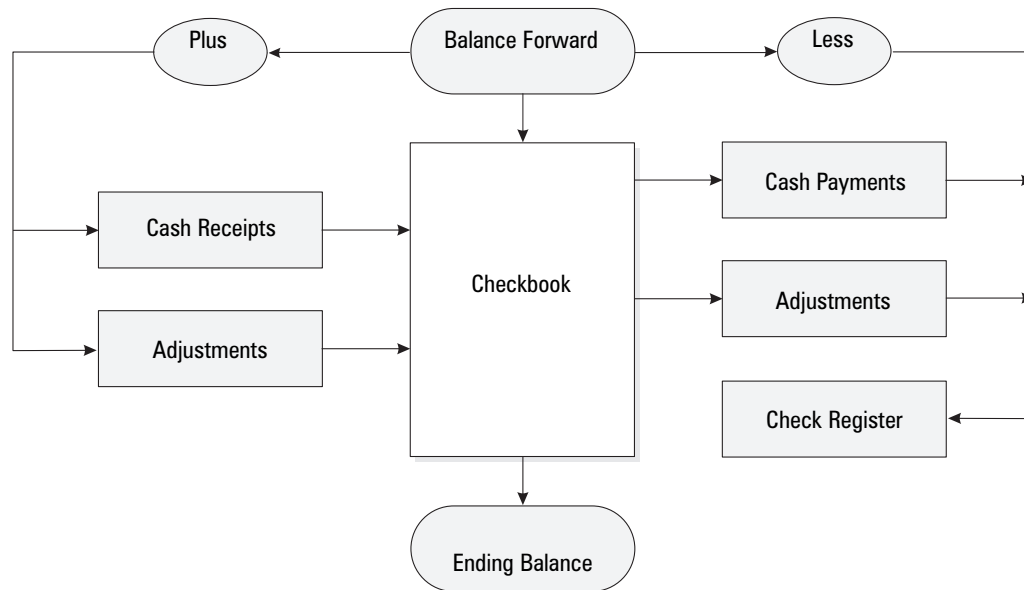


Figure 9-3
Checkbook entries and adjustments

The Check Register

Your check register is a neat summary for your own use and provides the basic general ledger input. You can hire an accountant to prepare your check register, but anyone in your office should be able to do the job if you include enough information on your check stubs.

The check register shows at a glance what expense categories you have and where your money goes. This document is the basis for the largest monthly entry in the general ledger. It lists in one place the accounting for all checks written, showing who received payments and in what amounts.

Most businesses need to maintain a check register, just as they need sales journals and other important records. The time required to complete a check register is minor compared to the register's usefulness. Prepare the register at least once a month. You might find it more convenient to work on it weekly, or even daily. You can't figure your monthly profit without a completed check register. If your monthly financial statement is prepared by a computer service bureau, you probably also receive a computer-prepared check register.

Most builders write a lot of checks. That's why monthly summary financial statements are a minimum requirement. Don't go longer than 30 days without preparing your check register. If you write only 50

checks each month, it might take half an hour or 45 minutes to do this job. But bringing a 60-day-old check register up to date can be a big job. And how long would it take you to go through 600 checks once a year?

Prepare the check register directly from your checkbook. From check stubs, list each payment in the order you made them. The information on each stub is crucial at this point, as the completeness of these records affects the quality of the check register.

When you design your check register, consider the nature of payments in your typical month. Select the important account categories you want to detail out and place them at the top as shown in Figure 9-4. The checks shown were listed in the register directly from check stubs, both in total and in distribution. Use one line for each check and show the date, payee, check number, amount and description. The description on your check stub must be detailed enough to make distribution to the proper account easy.

In Figure 9-4 all payroll checks are listed by net amounts only. Although payroll checks are written from this account, the detail is included elsewhere. Only the total appears here. There are several reasons for this:

- Listing only the weekly payroll total means that just four payroll lines are required, one for each week, rather than a line for every employee each pay period. That simplifies the check register.

Check Register
March, 20_____

Date	Paid To:	Check #	Total	Material	Net Payroll (Note 1)	Operating Supplies	Automotive Expenses	Other Expenses		
								Expenses	General Ledger	Description
3-1	Downey Management Company	482	\$600.00	\$	\$	\$	\$	\$600.00	\$	Rent
1	Tri-County Lumber	483	2,486.40	2,486.40						
2	Readi-Bag Company	484	300.00			300.00				
3	Kilroy Oil Co.	485	482.60				482.60			
3	Midfield Bank	486	600.00						600.00	Note No. 2
3	Midfield Bank	487	400.00						400.00	Note No. 3
4	Dearfield Building Supply	488	2,010.86	2,010.86						
5	Midfield Repair Service	489	260.00				260.00			
5	PAYROLL	490-501	1,525.82		1,525.82					
3-8	John's Lumber	502	1,899.00	1,899.00						
9	Local 46 Trust Fund	503	425.95					425.95		Union Welfare
9	Downtown Cleaners	504	260.00			260.00				
11	North County Lumber	505	3,311.86	3,311.86						
12	Midfield Bank	506	1,880.02					411.51	411.51	FICA - Feb
12	Department of Taxation	507	201.80						1,057.00	Federal Tax - Feb
12	PAYROLL	508-519	1,432.38		1,432.38				68.00	Disability Insurance
12	State Light & Power	520	48.56					48.56	133.80	State Tax - Feb.
3-15	Central Telephone Co.	521	160.12					160.12		Utilities
17	Matthews Tire Center	522	447.09				447.09			Telephone
19	PAYROLL	523-534	1,506.38		1,506.38					
19	Gallagher Oil Company	535	193.00				193.00			
3-22	Hunt's Supply Company	536	450.00			450.00				
23	Spanner Lumber Yard	537	1,140.08	1,140.08						
26	PAYROLL	538-549	1,483.00		1,483.00					
26	Heady & Krauss	550	200.00					200.00		Accounting
3-29	Midfield Bank	551	1,100.00						1,100.00	Note No. 1
31	State Board of Sales Tax	552	812.92						812.92	Sales Tax - Feb.
31	Sycamore Building Supply	553	1,612.60	1,612.60						
31	Void	554	0							
31	Rivas Stationery	555	29.91					29.91		Office Supplies
31	Nightwatch Patrol Service	556	25.00					25.00		Security Service
31	H.R. Goodwin, Broker	557	660.00					660.00		Insurance
Total			\$27,945.35	\$12,460.80	\$5,947.58	\$1,010.00	\$1,382.69	2,561.05	4,583.23	

Note 1 - Summary of Payroll	Gross payroll	Disability insurance	FICA	Federal tax	State tax	Net payroll
March 5	\$1,960.00	\$19.60	\$118.58	\$259.30	\$36.70	\$1,525.82
March 12	1,840.00	18.40	111.32	243.40	34.50	1,432.38
March 19	1,935.00	19.35	117.07	256.00	36.20	1,506.38
March 26	1,905.00	19.05	115.25	252.10	35.60	1,483.00
Total	\$7,640.00	\$76.40	\$462.22	\$1,010.80	\$143.00	\$5,947.58

Figure 9-4
Typical check register

- Fewer vertical columns are required because only the net payroll amount is listed.
- You need to prepare a special analysis for labor expenses each week, and the check register isn't the proper place for this. (See Chapters 11 and 16.)

One major function of a check register is that it identifies math errors. The total column is checked by adding distribution totals across the page. See Figure 9-4. This is called *crossfooting*.

Johnson Construction Company chose to break down its check information into Materials, Net Payroll (with summary for each week at the end of the register), Operating Supplies and Automotive Expenses. This last category includes gas, oil, and repairs. The final section, Other Expenses, lists all additional expenses and payments. Note that the Expenses column includes all payments that affect profit and loss. The General Ledger column includes all payments related to the balance sheet. You might prefer to use an appropriate code number from the chart of accounts instead of a written description in the Description column.

The categories you choose for detail listing are those you think have the largest number of checks each month. This depends on the nature of your business. You might find that you need more vertical columns in your check register. Most forms allow for much more detail than shown in Figure 9-4.

Writing Checks to "Cash"

Avoid writing checks made out to "cash." Business deductions for checks made payable to "cash" are questionable and harder to prove than checks drawn to a specific payee.

To reimburse your petty cash fund, show the distribution in detail. (See Chapter 17.) The amount should be supported by detailed receipts or vouchers. To write a check to yourself as a draw against salary (for individuals and partnerships), make out the check in your name and describe it on the stub as a "draw." There is always a better description than "cash."

Handling Voided Checks

Check 554 in Figure 9-4 was voided. Either an error was made in recording the check or the cancellation of a liability did away with the need for a payment. This happens commonly in every business. Even though there is no amount to be recorded, the

voided check is accounted for. Check 554 is listed to explain what happened to that check. It is shown with a zero total. This makes it clear that all checks are listed in sequence and are accounted for.

Many builders throw away voided checks. But voided checks are supporting documents just like invoices, canceled checks and statements. Always keep them as part of your fully-documented check control system.

Follow these steps when you void checks:

- Tear off the corner of the check where your signature would appear.
- Stamp or write "void" on the face of the check.
- File the voided check.

If you accumulate voided checks in a file for several years, you have a folder that's fat at the bottom and thin on the top. This is a bulky and inconvenient way to keep documents. Besides, it's hard to keep them in numerical order that way. Figure 9-5 shows one way to keep voided checks neatly. Set up a loose-leaf binder or booklet of blank pages. Tape voided checks (as many as will fit on one page) to the pages in check number order. The file stays flat and you have a numerical reference for all voided checks.

You'll need to refer to your voided checks when you require audited financial statements (for example, to apply for some kinds of loans), insurance audits, and stockholder audits (corporations).

Pegboard Check Registers

Check registers kept on a pegboard differ from manual checks, as does the procedure for maintaining the register. A pegboard system is more effective than manual check writing if you keep job cost records. The highly-proficient computerized systems available make the pegboard obsolete for most of today's applications. Below is a summary of pegboard check writing procedures for builders who still find the pegboard an efficient system.

In a pegboard system there's no check stub. Writing the checks creates the check register directly. This eliminates transferring information from stubs to the check register. The obvious advantage is that maintaining the check register and writing checks takes only slightly more time than writing the check alone. Distribute the total payment to one or more

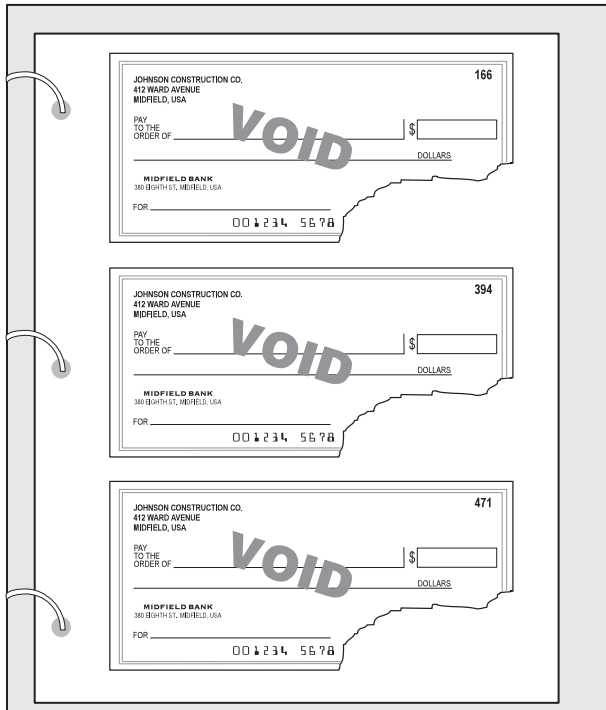


Figure 9-5
Register of voided checks

columns. You still have to add the total for each page. But the process of copying the date, check number, and payee is eliminated.

The disadvantage of pegboard check systems is that the design of the check isn't very flexible. Important information must be on a single line that's transferred through the check from a carbon strip on the back of the check to the check register. The checks must be written by hand; you can't type them. But the savings in time usually far outweighs the limitations on check choice and design if you write a large volume of checks. A pegboard check takes less time to write than a manual check by the time you fill in the check stub.

Figure 9-6 shows a typical check register and pegboard-style check. Filling in the date, payee, check number, and amount on the check creates an entry in the check register with the same information. Then you distribute the check total to the correct column or columns at the right of the form.

When a page is full, total each column. Check your math by adding the distribution column totals across. Your answer should match the sum of the "Total" column. Carry the balance forward from each column to the top of the next page to keep a running total of the balances.

	Date	Pay to:	Check #	Amount	Materials	CHECK REGIS								
						Supplies	Net payr							
JOHNSON CONSTRUCTION CO. 412 WARD AVENUE MIDFIELD, USA				393										
<table border="1"> <thead> <tr> <th>Date</th> <th>Pay to:</th> <th>Check #</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Date	Pay to:	Check #	Amount										
Date	Pay to:	Check #	Amount											
DOLLARS														
MIDFIELD BANK 380 EIGHTH ST. MIDFIELD, USA														
00 1234 56789 123456 789 12300														

Figure 9-6
Typical pegboard check and register

On any check register system you need a column for other categories of spending. As in the previous examples, there are usually two columns labeled Other Expenses and General Ledger. To make your classification job go more quickly, include a summary of these distribution columns at the bottom of the check register.

Figure 9-7 shows how to do this. The amounts in the Other and General Ledger columns have been summarized. This identification would normally be by account code, which saves time because it eliminates writing out lengthy descriptions for each category. Add subtotals for these summaries to find the total. It's better to catch math errors before you begin posting totals to the general ledger. By that time, arithmetic errors can waste a lot of your time.

Using pegboard-style checks may require some adjustment to your routine. Pegboard checks are usually printed and bound so they overlap one another and you must fold succeeding ones back to write each one. Otherwise, the following check would cover the one you want to write. But once you're used to it, a pegboard check system is easy to control. Many pro-

fessional building organizations use pegboard checks exclusively. However, automated systems, along with most computer software, are easier to use, and able to handle the most complex tasks at the click of a button. It's already becoming hard to find pegboard supplies and printed checks. Before too long, the most faithful pegboard user will have to start using a computer.

Other Check-Writing Methods

Computerized Check Writing

Computerized check writing is the most efficient system for businesses that write a large number of checks each month. Today, it's easy to find computer software that suits your needs.

The big advantage to automated check writing is the elimination of repetitive information. In the past, the check register's information had to be transferred later to job cost records, creating duplicate effort and increased chance for error. Today, you can write and encode a check and all required bookkeeping entries are automatically entered/posted.

Systems requiring vendor coding and high-maintenance basic record keeping are obsolete. Today, a vendor is easily identified within your system by the first few letters of their name. The only coding you might need in the current system is a job cost record code; and that can be managed with a last name reference, which is far easier to manage than a numerical code.

You don't need to print check copies for your records. Everything can be automated to reduce the paper you generate. This includes checks, registers, job records, and vendor records. Even the check information can be stored in your computer by vendor accounts.

A requirement with computers is to create back-up disks to hold all your business information in case your hard drive fails. A computer, like your car, will break down one day. You don't want to lose all the information on your drive. This is a constant worry for accountants. Before automation, part of your record-keeping system could be lost, but it was unlikely the whole system would disappear. Today, all records on your hard drive can vanish in a second. You don't want to learn this lesson the hard way. It could cost you much money and time to retrace and reenter the information.

	\$2,561.05	\$4,583.23
600.00		Rent
425.95		Union Welfare
411.51		Payroll Tax
48.56		Utilities
160.12		Telephone
200.00		Accounting
29.91		Office Supplies
25.00		Security Service
660.00		Insurance
<u>\$2,561.05</u>		Total Other Expenses
	1,100.00	Note #1
	600.00	Note #2
	400.00	Note #3
	411.51	FICA Payable
	1,057.00	Federal W/H Payable
	133.80	State W/H Payable
	68.00	Disability Insurance Payable
	812.92	Sales Tax Payable
	<u>\$4,583.23</u>	

Figure 9-7

Summary of Other Expenses and General Ledger columns

Creating a back-up disk is fast and easy. You simply copy your files onto removable floppy or zip disks and store them outside of the computer. Some people keep another copy in a different building, such as their house. It's unlikely both locations will simultaneously incur disaster.

You can get a large amount of information on a single 3½-inch floppy disk, and they're inexpensive. If your computer has a zip drive, much more information can be stored on a removable zip disk. At the time of this writing, many new computers come equipped with a CD-ROM burner. To put one in is no longer particularly expensive. The down side with CDs is that you can only write on them once, though this may soon change. Technology has come a long way since the old microfiche days.

Computerized checks don't guarantee that your system will be error free. As great as computers are, they can't replace human reasoning. A computer doesn't catch the ordinary errors that a person with common sense easily recognizes. Several years ago a very expensive research project demonstrated a computer limitation. Computer scientists programmed a computer to construct a basic building project using a mechanical arm. The idea was to show that a computer could absorb information from a set of plans and build the structure. One problem: The computer wasn't programmed to begin at the bottom and work up. The idea of gravity wasn't built into its logic. So the computer tried to begin at the top and work its way down. It picked up tiles for the roof and placed them in midair. Obviously (to us) they dropped to the table, resulting in a jumbled pile of tiles.

To avoid chaos in your bookkeeping system, remember, the computer only processes what you enter. If you input wrong codes, amounts, dates, or other basic information into the computer, you'll have an unproductive bookkeeping system. This is known as Garbage In, Garbage Out (GIGO). Mistakes can be expensive and affect your entire system — job cost records, the general ledger, and financial statements.

Like any check writing system, in an automated system, checks containing errors have to be voided and replaced. In most systems it's possible to write checks whenever you want by selecting that area of your program. In outdated computers an incorrect check couldn't be replaced until the next "batch" was run, usually the next day. New computer systems are more competent, making your job easier.

However, you need to carefully review every payment being made from your account and to sign all checks individually. A danger of automation is that you might loosen your control. Mistakes — and delib-

erate errors — are easier to miss in an automated system, so you can't afford to let your guard down.

Voucher Checks

Another method for writing checks is the voucher check system. This involves typing out a check that has an original, plus one or two copies. This was popular when a typewriter was the primary office tool; however, voucher checks, like pegboard systems, are becoming obsolete.

Vouchers have a distinct advantage over pegboard systems because the checks are typed. They look more professional than handwritten pegboard checks. Typewritten checks make better copies than handwritten carbons. You can attach one copy to the invoice or statement for the "paid bills" file and the other copy to manually record in the check register. The voucher system is time-consuming because mistakes can't be typed over. The original check (if possible) has to be corrected along with both copies, or the check has to be retyped.

Figure 9-8 shows a sample voucher check and a Record of Cash Balance form. All of the checks written each day are added together and entered in the "Checks" column of the Cash Balance record form. The day's deposits are entered in the "Deposits" column, and a running balance is kept. Any known bank adjustments are included under deposits or checks, depending on whether they're additions or subtractions.

The voucher system uses a check protector to stamp the check amount onto the check. The machine can also print an automated signature. The machine makes it difficult to alter the check amount, but with the automatic signature, it doesn't prevent checks from getting signed before you review and approve them for payment. You could be inviting trouble.

Voucher checks are insufficient compared to the automated systems available today. And like the pegboard system, they're somewhat cumbersome to use. Finding replacement multi-copy checks will become more difficult as people switch over to automated systems. The voucher system will eventually go the way of the pegboard. It was great 20th century technology, but that's in the past.

■ Paying Accounts Payable

An accurate financial statement requires reliable information, prepared consistently from month to month. Under the accrual method of accounting, this

[illegible]

Figure 9-8
Voucher check

means that you must make adjustments to your general ledger balance for accounts payable.

The accrual method of accounting requires adjustments for events that haven't happened yet — such as recording income earned but not received, or bills due for which you haven't yet written a check. The accumulated balance of all bills you owe is your true accounts payable. If you know a month in advance that you will owe money to someone, it's an account payable if the services or goods have been received. Don't include liabilities for things you've ordered and will receive in the future, but for which you haven't yet been billed

The other principal accounting method is the cash system; you recognize only cash transactions and don't allow for money due you or owed to others. Under the cash accounting method, you don't record accounts receivable and accounts payable. While this method is acceptable for income tax reporting (when used every year), it doesn't reflect the true financial picture in a building business because the money owed to you and the money you owe has a significant effect on your profit and loss statement and balance sheet.

Some builders record accounts payable only yearly. They carry that balance as the payable liability all the following year. This method gives an accu-

rate picture of the financial condition of the business only if the monthly changes in accounts payable are minor. The accounting entry made in the last month of the year would show:

	Debit	Credit
Various cost and expense accounts	xxx	
Accounts Payable (liability account)		xxx

At the same time, an entry must be made to reverse the previous year's accounts payable accrual:

	Debit	Credit
Accounts Payable	xxx	
Various cost and expense accounts		xxx

Since the same balance of accounts payable will be carried all year, the offsetting changes to the various cost and expense accounts must also be carried all the following year. Any significant changes in the true balance of accounts payable is not reflected in the monthly financial statements. To this extent, those financial statements don't reflect the facts.

One way to solve this problem is to compute the true accounts payable each month. Make a monthly journal entry to record accounts payable and reverse

the previous accounts payable total. But this requires keeping your accounts for the month open until you receive all your current bills (for example, until the 10th of the following month). Most builders find it inconvenient to keep the books open that long.

The most efficient way to keep track of accounts payable on a monthly basis is to maintain two check registers — one for current month billings and another for previous month billings. This method lets you pay bills received in the current month for amounts due in the prior month and record these as payments for services in the prior month. Figure 9-9 illustrates the procedure. *Cr.* stands for credit and *Dr.* stands for debit. In the month of April, you keep a check register for April payments. Beginning on May 1, start a check register for May payments on May payables. But also open an accounts payable register for May payments of April payables.

Once the register for April is closed, the balance of accounts payable is reversed as shown at the right in Figure 9-9. The net effect of this is that the balance of accounts payable is fixed at the end of each month and the total is reversed each month after you close the books. This method is ideal for builders who have a large volume of checks. It works best if you use two different sets of check numbers: one for the check register and one for the accounts payable register. Without this precaution, you lose the control inherent in writing checks for each month in numerical sequence.

Figure 9-10 should help you better understand the result of using a dual register system. This summary form shows the effect of the various transactions on the accounts involved. The cash account entry shows all cash payments. The accounts payable account is reversed to zero each month. But as of the close of any period, the accounts payable total should show the actual amount owed.

Multiple Checking Accounts

As mentioned above, one of the problems with the two-register method is that you must use checks with two series of numbers. This complicates balancing your bank account because outstanding checks also fall into two series. There is another way to simplify recording accounts payable and it might also help you balance your bank account. This involves using two checking accounts and alternating what you use them for from month to month. This is illustrated in Figure 9-11.

Beginning on the first day of April, write checks from account B and continue through the month. On the first day of May use that account only to write checks against the accounts payable register and use account A for current payments. Balance account B at the end of May. By that time, most, if not all, of the accounts payable checks will have cleared (assuming you pay all your bills around the 10th of the month). From the last check for May's check register (account B) to the first check in the May accounts payable register (also account B), the number sequence is unbroken so your statement will contain only one series of numbers.

Beginning on June 1, bank account B is again used for paying the current month's bills, while account A is then used for the May accounts payable register. Balance account A at the end of June.

This method reduces the number of outstanding checks for each account in alternate months. Each account is inactive for almost a month at a time. The outstanding checks list is smaller every second month because no checks are written for two or three weeks prior to the end of each alternate month. This is an important consideration for builders who write many checks. It could save a lot of time when you write out your lists of uncleared checks.

With a single checking account, it's always a good idea to balance it every month. In this case, you have two accounts, but only balance each of them on alternate months. And balancing takes less time because there are fewer outstanding checks.

Bank Deposits for Multiple Accounts

Maintaining two checking accounts requires some planning of bank deposits. You must be careful to make deposits to the proper account to cover expected checks, whether they are for current payments or for the previous month's accounts payable. If both accounts are in one bank, you can usually request a transfer between accounts over the phone. Otherwise, you can write a check from one account to the other. The extra attention needed to use a dual account system is usually more than offset by the advantages.

Another use of multiple checking accounts is in setting aside funds for special purposes. For example, some builders have three accounts:

- **General Account:** For the bulk of costs and expenses. This account should receive all bank deposits.

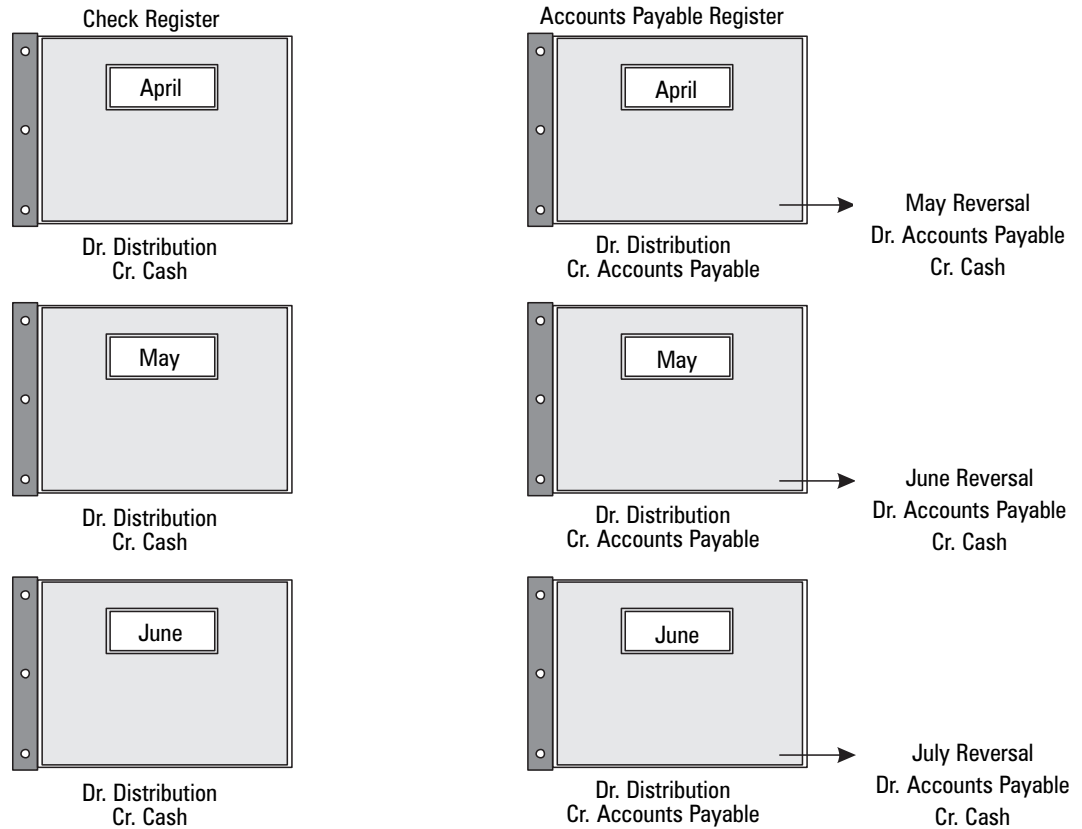


Figure 9-9
Accounts payable – double register method

	Cash Account		Accounts Payable		Distribution	
	Debit	Credit	Debit	Credit	Debit	Credit
April:						
Check Register		100			100	
Accounts Payable				200	200	
		100		4/30 200	300	
May:						
Reversal		200	200			300
Check Register		300			300	
Accounts Payable				400	400	
		600		5/31 400	1000	
June:						
Reversal		400	400			500
Check Register		500			500	
Accounts Payable				600	600	
		1500		6/30 600	2100	

Figure 9-10
Summary of dual register system

Bank Account A	Bank Account B	Accounting Month
	April Check Register	April
May Check Register	April Accounts Payable Register	May
May Accounts Payable Register	June Check Register	June

Figure 9-11
Using two checking accounts

- **Payroll Account:** For payroll only. Deposit in this account only enough money to cover the payroll and the estimated service charges. Maintain a minimum balance in this account.
- **Tax Account:** Like the payroll account, deposits are made to this account from the general account only as required. The amount deposited is the estimated total taxes due. These might include payroll taxes, sales tax, highway use tax, property, public utilities, and any other taxes.

Whether multiple accounts are used for different kinds of payments, or just to stagger activity in the check register and payroll register, maintain the controls required. The more accounts you have, the more bank accounts you have to keep balanced, the more printed checks you have to buy and the more service charges you have to pay.

■ Multiple Businesses

Some builders run more than one business from the same office. This can cause a lot of bookkeeping problems, such as the allocation of shared overhead

and inventories. Bills paid by one business may be partly charged to the other business. This requires some established control method for inter-company dealings.

Accounting for multiple businesses under single ownership can be difficult, especially when it comes to the checkbook. For example, suppose you decide that one-third of your rent should be paid by the second business. Should you split the bill and write two checks? Or should one business pay the bill and be reimbursed by the other? It's a problem either way. It's nearly impossible to allocate overhead expenses precisely between two businesses. The basis on which this is done must vary with each type of expense. Even with the best and most complete analysis, allocation is still an estimate. And money flowing back and forth between the two businesses will obscure the true profit picture of both.

But the two-business shop is common. The builder with two businesses can only handle the accounting in the best way available. The best accounting system for a builder who owns both businesses is to avoid transfers between the two operations except for periodic adjustments. This involves

setting up a balance sheet “net worth” control account on the books of both companies. The net worth account of a dual-operation shop would look like this:

Paid-in Capital	xxx
Retained Earnings	xxx
Johnson Freight Co., Control	xxx
Total Net Worth	xxx

This example assumes that Johnson Construction has a second operation, Johnson Freight Company. This freight company’s net worth section would include a similar control account, Johnson Construction Co., Control. The balance at any time would be identical in both accounts. One would be a positive number. The other would be negative, depending on which company owes the most to the other.

Clear the control accounts to zero occasionally by issuing a check from one company to the other. Keep these transfers to a minimum to make it clear the two companies are indeed separate. Dual-business operations often have far more than their share of problems. Reduce the problems to a minimum by keeping the books as simple as possible.

If Johnson Construction makes a payment, one third of which is due from Johnson Freight Company, the entry would be:

	Debit	Credit
Distribution (two-thirds)	xxx	
Johnson Freight Co., Control	xxx	
Cash		xxx

Johnson Freight Company would make this entry in its books:

	Debit	Credit
Distribution (one-third)	xxx	
Johnson Const. Co., Control		xxx

The two control accounts would have the same entry. The Johnson Freight Company entry, picked up from an allocated charge, should be supported by a voucher to be issued like a bill from Johnson Construction. This is the right way to document the assignment of a bill from one company to another.

Good records require this minimum amount of paper flow. But there is no advantage to paying a bill for another company to avoid writing out a separate

check. The payment still must be documented. In this example, some supporting document is required for two sets of books — the charging company and the charged company.

Dual operations cause more paper flow, not less. If you need to operate more than one business, keep the books for each business separate and share expenses by writing multiple checks.

The Automated System

Will full automation of your system change the way you manage check writing? If you do a large volume of checks, it will certainly cut down on repetitive work. For example, in a sophisticated bookkeeping system, you should be able to make one entry to produce the following:

- a printed check
- an entry to cash disbursements journal
- a summary entry to general ledger
- a running record adjustment to cash balance
- a job cost record entry

That's a lot of information for a single entry. This demonstrates some of the advantages of automating your bookkeeping system. If you're working with a high volume of transactions, a non-automated system could demand so much bookkeeping time that it limits or prevents growth. So the effectiveness of automation makes a lot of sense.

Whatever system you use, you need to keep control of your records and be responsible for managing your accounts and all aspects of your business. One important reason for bookkeeping is to provide the needed information to properly control what's going on in your business. As an experienced owner, you can get a lot of information from observing the outflow of money, especially when it's flowing *out* of your account. For example, you might notice a big increase in material costs, but not a corresponding completion rate in the job involved. That deserves investigation. Why are you buying that much material, and what will that do to your cash flow next month? Is your bookkeeper taking advantage of discounts offered? Is the cost coded to the wrong job? Have you missed anything?

In other words, if you have a computer system installed and working well, it doesn't mean you can afford to stop policing your transactions. The books and records tell you a lot; but, like walking a job site

yourself to see how it's going, you need to "walk" through your books to see what's going on financially.

The check-writing system you use should be the most efficient you can find. Don't adopt a procedure that gives you less than you need or more than you

want. For some builders, a pegboard or voucher system works well enough. It's flexible but allows room for growth. Fortunately, the volume of checks in most operations does not grow as much as receivables. So any workable method should have a long useful life.

Test Questions:

1. Keeping accurate check-writing records is important because without such records:

- A. You won't have important information available when you need it.
- B. You won't be able to tell where your money was spent.
- C. Budgeting and forecasting will be impossible.
- D. All of the above.

2. A "source document" is:

- A. Something you use to determine how to classify expenses.
- B. Another name for a deposit slip that shows details of the source of funds being put into the bank.
- C. Documents that explain earnings and expenses, including sales orders, purchase orders, invoices, and receipts.
- D. The tracers banks put on deposited funds to help you locate missing checks.

3. One good way to make sure your checkbook balance is accurate is to:

- A. Starting from the ending balance, add checks and subtract deposits to see if you arrive at the beginning balance.
- B. Add all checks, subtract deposits, and estimate how close you are.
- C. Use the bank's ending balance as your balance forward.
- D. Hire a bookkeeper to keep track of the balance for you.

4. Typical adjustments you should expect to see when balancing your checkbook include:

- A. Outstanding deposits and checks.
- B. Automatic payments and special charges.
- C. Returned checks.
- D. All of the above.

5. To keep track of your checkbook balance when voiding a check you wrote the month before:

- A. Make the notation at the time it is written and don't subtract anything from the balance.
- B. Add the amount to your current balance and remove the outstanding check from your list on the bank reconciliation.
- C. Don't do anything; since the check is void, it doesn't matter.
- D. Call the bank and ask them to deposit the amount back into your account, then count it as a deposit this month.

6. The bank reconciliation is easier if you remember that:

- A. You're just accounting for timing differences and correcting discovered errors. Once you understand the nature of a transaction, the process is much easier.
- B. The bank has computers and their numbers are more dependable than yours; so save a lot of time by taking the bank's word for any disputes.
- C. All outstanding checks and deposits should be added to the bank's ending balance to arrive at a dependable estimate of what you have.
- D. You're never going to get it exactly right; being close to the reconciled balance is considered a successful job.

7. You should avoid writing checks made out to "cash" because:

- A. Such payments aren't acceptable to the IRS, even when they are for legitimate business expenses.
- B. It's preferable to write a business check to the individual or company being paid, just as a matter of good record keeping.
- C. It could look like you're trying to take money out of the business without paying taxes on it.
- D. All of the above.

8. A pegboard system is one in which:

- A. You write the check and, at the same time, create a duplicate record as well as any needed subsidiary records; it reduces the time required to keep books.
- B. A system in which invoices and receipts are kept in pegged bins and containers, to make it easier to classify and enter them into the books at the end of the month.
- C. A system based on the theory of single-entry accounting, in which controls are pegged on a simplified board.
- D. A system not recommended, because the records produced are not acceptable for tax purposes; without a check stub, the IRS will not accept pegboard records as proof of payment.

9. You should use a separate "accounts payable" register when:

- A. You just can't keep track with one register, no matter how few transactions you have.
- B. The IRS tells you to separate accounts payable from current expenses.
- C. You have a large volume of transactions, and it's desirable to keep current expenses and payables separate from each other.
- D. You don't mind paying for two different sets of imprinted checks.

10. You should write checks with a computerized system when:

- A. You have the professional training to learn how to program your own computer.
- B. The industry finally develops a simple, efficient system.
- C. You can afford to buy a computer and hire someone who knows how to use it.
- D. The volume of transactions makes that method the most efficient one available.

11. The voucher system:

- A. Is the most efficient system available because it does away with duplication.
- B. Is used only for materials, but not for general expenses.

- C. Is largely obsolete in today's automated environment.
- D. Does not meet federal record-keeping requirements.

12. Automating your check writing provides you with:

- A. Computer-generated checks.
- B. Job cost records.
- C. Entries to your journal and ledger.
- D. All of the above.

13. Under automated accounting procedures, you:

- A. Need to continue reviewing transactions.
- B. Use the computer to replace check-by-check review.
- C. Can save time previously spent checking everything.
- D. No longer have to sign each check individually.

14. With a computerized system, you:

- A. Should still maintain manual files for everything.
- B. Can eliminate all the manual paperwork in your bookkeeping system.
- C. Reduce manual files and replace them with more efficient automated records.
- D. Need to hire a bookkeeper who's a computer expert.

15. It's always a good idea in an automated system to:

- A. Print out records every day so you have a back-up record.
- B. Copy all records onto microfiche.
- C. Back up your hard disk on a removable disk system.
- D. Have two systems, one on computer and the other kept by hand.

Accounting for Materials

Direct costs are those related to the work you do and don't include overhead or other expenses. As sales increase or decrease, so do direct costs and gross profits. The largest direct costs to a builder are subcontracts, materials and labor. Materials include everything you buy that will be installed on your jobs — both material used from your yard inventory and material delivered directly to job sites by the supplier. Freight charges on that material are direct costs because they're part of the cost of getting the material into the structure.

Indirect costs are the expenses of taking a particular job that don't involve any work on the job itself. Indirect costs include freight, administrative payroll and small tools — anything not billed to a specific customer.

Overhead is the cost of the items you need to conduct business that you can't charge against a particular job. These include office space and utilities, clerical help, small tools, printing, postage and the like. Overhead remains fairly steady regardless of how busy you are. Direct and indirect costs change as your volume changes. This chapter examines direct material costs and shows how to use ratios to analyze the effectiveness of material handling. Direct labor costs and payroll records are the topic in Chapter 11.

■ Materials Handling and Control

The most professional builders pay a great deal of attention to materials handling and control. That's because about half your direct costs will be for materials. And it's estimated that about 8 to 10 percent of labor costs on residential construction are spent just to move materials from the curb line to where they're installed. But that's just the beginning of the problems caused by sloppy material control:

- Early deliveries mean overstocked yards and on-site vandalism, arson, theft, and weather-related losses.
- Chronic overstocking increases your cost for insurance, handling, property taxes and distribution, and can mean losses from obsolescence.

- Late-arriving materials cause expensive delays, interrupt your job schedule, require rescheduling of subcontractors, and create costly idle time. Without a good materials handling program, even the best builders lose profits.

Agree on delivery terms with your suppliers. This is as important in controlling costs as large discounts, lower prices, and quality materials. Suppliers who are dependable in meeting your delivery dates will save you more money than discount suppliers who can't deliver on time.

A well-organized builder needs to know exactly what he wants, and when. Develop a firm on-site schedule. Stick to this schedule and the job will move along smoothly and profitably. Idle time is cut and deliveries are there when you need them. Know as far in advance as possible what will be needed at each site on a day-to-day basis.

Volume buying is a big part of a good purchase plan. A good supply of materials in shop inventory gives you a contingency reserve you can use when deliveries are short. Volume purchasing also brings discount terms, which can make the difference between high and low profit. But discounts are valuable only if you can justify the purchase. Be sure you can use the discount material in the reasonably near future. Otherwise, your yard becomes loaded with dead inventory. This extra handling and storage means higher operating expenses and an unnecessary commitment of your capital.

You can have a smooth flow of materials through the yard if your operation is diversified. For example, Johnson Construction does both bid contract work and repairs and improvements. It can order and use a steady supply of inventory, switching from one type of job to another during slack periods or to meet varying demand. But Johnson Construction can still overstock if they make large materials purchases that they can't use on upcoming jobs.

Controlling Purchases

Your mix of jobs should keep your inventory moving steadily. But you need control over materials entering your yard from suppliers. Written purchase orders are the most simple control device. Specify to your suppliers, wholesalers, and shippers exactly what materials you want, when you want them, and where you need them delivered. That's how you avoid misunderstandings and late or early deliveries.

You can authorize your field superintendents or supervisors to make purchases on your purchase order

form. This may be your only way of controlling job costs before you are committed. Control of the form itself should help you cut down on unauthorized purchases.

With a purchase order system, you often receive a confirmation from the supplier including terms and conditions. This lets you compare suppliers' terms to find the best place to buy specific materials.

Figure 10-1 shows a typical purchase order. A purchase order form should include the following information:

- Billing and delivery address
- A preprinted number (control purchase orders just like you control checks)
- Order and delivery dates
- Shipping instructions, including the carrier and delivery terms
- Quantity, description, unit price, and total price for each item
- Sales tax (for purchases not for resale, such as tools, equipment, office supplies, etc.)
- Authorized signature

You need at least three copies of the purchase order. Distribute copies as follows:

- Original and first copy — To the supplier. The supplier will return the first copy to you as written acknowledgment/confirmation of the order terms.
- Second copy — For the office file. Keep the file in numerical order.
- Accounting copy — To be matched to the invoice when received. Keep these in alphabetical order until bills are paid. Check the prices on the invoice against purchase order (agreed) prices. This can also serve as a follow-up copy, first filed by due date for expediting purposes, then forwarded to accounting with the packing slip when the order is delivered.
- Fourth copy — Optional, for receiving purposes if necessary. You may want a document in hand when the delivery arrives at the job site, to confirm that the order is correct.

A well-documented purchase system provides you with a ready reference, good records, and better communication with suppliers. Purchase orders are the basis of a smoothly-run delivery schedule.

Johnson Construction Company Purchase Order			
Date _____		Job Number _____ No. 89376	
Billing Address Johnson Construction Company 412 Ward Avenue Suite 8B Midfield, CA 01020	Delivery Address <div style="height: 100px;"></div>		
Shipping Instructions <div style="height: 100px;"></div>			
Qty.	Description	Price each	Total
Total			
Date confirmation requested _____		Signature _____	
Confirmed by _____		Title _____	

Figure 10-1
Purchase order

[illegible]

Figure 10-2
Purchase journal

Summarize your purchase orders on a purchase journal so you can analyze total company material purchases at a glance for a given period. Organize your summary in purchase order number order. See Figure 10-2. A properly-designed form provides both inventory summaries and breakdowns by job.

This is a good way to compare budgeted spending to actual costs. The first three columns are for Date, P.O. Number and Total Purchase. The next columns show the distribution of these costs. The first distribution column, Inventory, is for purchases that will go into your yard inventory. You control materials purchased and delivered directly to each job site using the purchase date and purchase order number reference as a distribution guide. You know what you need for each job in the immediate future. This form helps route deliveries where they are needed and keep the inventory levels adequate for your work output. It helps keep down unnecessary material purchases that

cause timing problems and cash shortages. This journal also assures that your jobs are allocated the right amount of materials from the suppliers on the right dates.

Some builders use the purchase journal as a source document for accounting entries. Purchases are treated as accounts payable, and the entire purchase journal is used as a supplementary accounts payable ledger. But using the accounts payable and check register method discussed in Chapter 9 is more effective than using the purchase journal as an accounting document. The two procedures are not compatible. The real usefulness of a purchase journal is for better control of your inventory.

But if your purchasing system *requires* that you use a purchase journal as an accounting document, here is the entry you must make each month to record purchases.

	Debit	Credit
Purchases (Direct cost)	xxx	
Accounts Payable (Liability)		xxx

As purchases are billed and paid for, an entry must reverse the one above:

	Debit	Credit
Accounts Payable (Reversal)	xxx	
Cash (Paid out)		xxx

Record all purchases in the purchase journal. Be careful to code all material payments correctly. If payments aren't entered in the purchase journal, you'll overstate both the liability for accounts payable and the materials purchased accounts. This is an example of a troublesome accounting procedure. It creates more problems than it solves. If you use a purchase journal, be sure *all* purchasing transactions go through it.

■ Controlling Inventory

Controlling your inventory requires a purchasing plan that's in line with a strict inventory level policy. How much do you need to keep on hand, and of what materials? Lack of planning and control can leave you with too much or too little material at any given time. Having too much ties up working capital that could be better used. Keeping too little material on hand can cause expensive delays. You can't tell exactly what piece you'll need tomorrow or next week. Keep a reasonable amount of surplus materials on hand to save time and allow you to bring in more short-term contracts.

Establish minimum and maximum levels of shop inventory, then stay within those limits. To do this you need to know what you have on hand. This means keeping track of your inventory on a perpetual basis.

Purchase orders summarized on the purchase journal tell you what has gone into inventory. But that's only half of the equation. You also need a systematic way of knowing what comes out. If you carry more than a few thousand dollars' worth of inventory in your yard, every piece of material drawn from your yard should be documented with a requisition. This cuts your losses and controls your stock.

Johnson Construction Company
Stock Requisition

Date _____ Job Number _____

Issued ☐
Returned ☐

Qty.	Description	Price each	Total
Total			

Signature _____

Figure 10-3
Stock requisition

Figure 10-3 is a stock requisition. The information needed to complete this form includes the date, job number, material description, number of items, price each, and total amount. The amount should be equal in value to the amount at which items are carried in the inventory. We'll talk about valuation a little later in this chapter.

Near the top of the stock requisition are two boxes, labeled *Issued* and *Returned*. When materials are taken from inventory, check the *Issued* box. When materials are returned to inventory, check the *Returned* box. You can also use the requisition form to generate a purchase order to replenish "issued" items.

To keep a running account of inventory, carefully divide your requisitions into issues and returns and record them by date on an inventory form. See Figure 10-4.

You can keep a running inventory on a daily, weekly, or monthly basis. Beginning with a physically-counted balance, subtract issues from inventory and add returns and orders received. You need to take a physical count from time to time to determine

There are four major inventory categories. They should be distinguished from each other, since you may have to keep separate records unless all your materials fall into the first category.

- **Raw materials:** This includes all direct purchases for use on various jobs.
- **Supplies:** This could include items like nails, bags or boxes.
- **Work in process:** You need this category if you fabricate in your shop.
- **Finished goods:** Products that are ready to sell in a prepared state fall into this category. Finished goods are different from raw materials because they've been processed to produce a completed item.

Some builders who do shop work keep inventories of both shop materials and job site materials. This means they need a complete requisition system for each site, unless they take a physical count regularly. You can avoid this problem if you consider goods delivered to construction sites as out of inventory and thus committed to the jobs.

■ Analyzing Materials and Inventory

There are two principal ratios used to judge whether the level of your inventory is too high or too low for the volume of work you do. One is the cost of goods sold to average inventories. The other is sales to inventories. The sales to inventories ratio isn't a precise indication of effectiveness because inventories are based on the cost of materials and sales are based on a computed cost plus profit. But you can use this ratio if sales are stable from month to month.

A far more useful ratio is the cost of goods sold to average inventories. The cost of goods sold represents all direct costs, adjusted for the change in inventory levels. Here's how to calculate it:

Inventory at beginning of period		xxx
Labor	xxx	
Materials purchased	xxx	
All other direct costs	xxx	
Total direct costs		xxx
Direct costs plus beginning inventory	———	xxx
Less: Inventory at end of period		xxx
Cost of goods sold		<u>xxx</u>

Find the second part of the ratio, average inventories, by adding the balances of the physically-counted and perpetual inventories from each month and dividing by 12. Shown below are physical inventories based on the calendar year, but partnerships and corporations can base their physical inventories on the fiscal year.

January	(perpetual)	xxx
February	(perpetual)	xxx
March	(physical, quarterly)	xxx
April	(perpetual)	xxx
May	(perpetual)	xxx
June	(physical, quarterly)	xxx
July	(perpetual)	xxx
August	(perpetual)	xxx
September	(physical, quarterly)	xxx
October	(perpetual)	xxx
November	(perpetual)	xxx
December	(physical, yearly)	xxx
Total		xxx
Average monthly inventories		<u>xxx ÷ 12</u>

Since there are four possible types of inventories, there are four variations on the ratio.

- **Raw materials:** Ratio = Cost of raw materials used ÷ Average inventories of raw materials
- **Supplies:** Ratio = Cost of supplies used ÷ Average inventories of supplies
- **Work in process:** Ratio = Cost of goods completed ÷ Average inventories of work in process
- **Finished Goods:** Ratio = Cost of goods sold ÷ Average inventories of finished goods

Compute these ratios regularly. Monitor trends as they progress and take corrective action as necessary. A low ratio can mean that your average inventory is too high. A high ratio can mean that you're maintaining too small an inventory and may result in lost sales. The correct level depends on your operation and its volume.

Good inventory control does the following:

- Minimizes investments in capital inventory
- Reduces the need for storage space
- Reduces exposure of materials to theft or arson
- Reduces taxes, insurance, and other costs of maintaining an inventory

- Lets you take advantage of discounts, reductions, and special prices through volume purchasing
- Provides needed materials fast
- Helps you avoid construction delays
- Minimizes obsolescence losses
- Helps you track the amount of material on hand while reducing the cost and time of physical counts

The Non-System System

Whether you account for materials by hand or with a computer, the important thing is to install the procedures you need for your particular business. A system that does more than you need is as ineffective as one that doesn't tell you enough.

Many builders can get by without any formal method for accounting for materials. They simply work from job to job without a material tracking system. You don't need a system if you don't keep inventory on hand. Many contractors in different specialties order materials for specific jobs and have them delivered directly to the site — or they pick them up as needed and take them to the site themselves.

Without inventory, there's no back-order problem. There's also no need to count inventory, insure it, pay for storage space, or deliver it to job sites.

You may still have to analyze material costs as they relate to total job costs and profits. Some builders depend on supplier discounts to make their material margins instead of marking up materials substantially. This is fine as long as you can get an acceptable discount, which means you pay by the deadline and order a regular volume of materials. If you don't qualify, you need to add on some markup when you bill your customers. Analyzing your costs versus profits will tell the story.

Here's an example. Say you've noticed that you make a higher percentage of profit on smaller jobs, or jobs requiring more labor than materials. This is an indication that you're not giving material costs due consideration. Since you have to invest capital in materials during the job, you should mark up your costs to compensate yourself. How much? That depends on the local custom. If you go too low, you're cutting into potential profits. If you go too high, you'll lose business to more competitive builders. Your records will help you make the call.

Test Questions:

1. A “direct” cost is one that:

- A. Must be paid directly to the creditor, without delay and without using a middle man.
- B. Is directed by contract rather than by ever-changing market prices.
- C. Is directly and specifically related to one job.
- D. Accountants also refer to as overhead.

2. Contractors who keep inventories of materials should be aware that overstocking means:

- A. Higher insurance premiums and lower efficiency in the use of storage space.
- B. More commitment of capital you could be turning over to produce higher profits.
- C. Higher property taxes and the potential for losses due to obsolescence.
- D. All of the above.

3. You need several copies of purchase orders because:

- A. Keeping track of purchases requires numerical records, a copy to match to an invoice, and a receiving copy.
- B. Each department within your company needs a copy.
- C. It is impossible to prevent theft unless you track purchases all along the way.
- D. All of the Above.

4. A purchase journal is handy for:

- A. Keeping track of unreceived purchases, treating them much like accounts payable.
- B. Making sure suppliers don't overcharge you for materials, which they invariably do if you don't keep this journal.
- C. Controlling job costs in extreme detail, which is required by federal law.
- D. Making monthly entries directly to the books, since the purchase journal is the only way to do that.

5. You record purchases each month from the purchase journal by:

- A. Debiting accounts payable and crediting the inventory account.
- B. Debiting purchases and crediting accounts payable.
- C. Debiting both purchases and accounts payable.
- D. Debiting accounts payable and crediting cash.

6. You reverse the entry made in question 5, above, each month, as purchases are billed and paid for, by:

- A. Debiting accounts payable and crediting the inventory account.
- B. Debiting purchases and crediting accounts payable.
- C. Debiting both purchases and accounts payable.
- D. Debiting accounts payable and crediting cash.

7. You should take physical inventory:

- A. Only at the end of the year, because it is so time-consuming.
- B. Every week, to make sure you catch shortages as they occur.
- C. At least once per month, without exception.
- D. As needed, either in full or on a revolving partial basis, to be determined by specific need.

8. Typical methods of valuing inventory include:

- A. Specific cost method or lower of cost or market.
- B. FIFO (First in, first out).
- C. LIFO (Last in, first out).
- D. All of the above.

-
- 9. You would classify part of your inventory as “work in process” when:**
- A. You are keeping inventory for jobs not yet completed, when materials were not shipped directly to the job site.
 - B. You prefabricate materials in your shop.
 - C. Part of the shipment was received and the remainder was back-ordered, so the shipment is classified as work in process.
 - D. The work at the job site has begun and your crew is waiting for the material, so it will be shipped out as soon as it arrives.
-
- 10. The actual cost of goods sold is calculated by:**
- A. Adding beginning inventory and direct costs paid during the period, and subtracting the ending inventory.
 - B. Adding the ending inventory to all direct costs paid during the period, and subtracting the beginning inventory.
 - C. Adding together all direct costs actually paid or accrued, without regard to changes in inventory levels.
 - D. Subtracting ending inventory from the beginning inventory.
-
- 11. A stock requisition form is used for:**
- A. Your employees to request materials from inventory.
 - B. Your communication with suppliers.
 - C. Monitoring inventory going into your warehouse.
 - D. All of the above.
-
- 12. A running inventory can be kept using stock requisitions to:**
- A. Account for items coming into inventory.
 - B. Account for items going out of inventory.
 - C. Both A and B above.
 - D. Facilitate a physical count of stocks.
-
- 13. A running inventory is calculated by:**
- A. Adding inventory issued and subtracting returns and orders from physical count.
 - B. Doing a physical count every time.
 - C. Subtracting issues from physically counted inventory and adding returns and orders received.
 - D. Your accountant.
-
- 14. Instead of counting all of your inventory several times a year, consider:**
- A. Counting different categories at different times.
 - B. Counting only the big items, which take less time.
 - C. Doing the physical count only at year-end.
 - D. Estimating only, without any time-consuming physical counts.
-
- 15. In an operation including shop work, you could have up to four different types of inventory. These are:**
- A. Raw materials, purchased materials, overstock, and finished goods.
 - B. Raw materials, job-assigned materials, supplies, and all other.
 - C. Regular inventory, special-order inventory, pending inventory, and supplies.
 - D. Raw materials, supplies, work in process, and finished goods.

Payroll Accounting

Labor is the largest and most variable cost in building. Because of the nature of labor costs and the legal and practical needs for payroll bookkeeping, you must keep complete records. This chapter covers the record-keeping requirements and procedures related to the company payroll. Regardless of whether your operation employs one or a hundred employees, you need these records:

- Detailed earnings records for all employees
- Summaries of payroll data for reports you file with the federal and state governments, state employment agencies, and health and compensation insurance companies
- Payroll accounting information for your general ledger
- Good payroll records for preparing company budgets and in-house labor cost reports
- Labor cost data broken down by specific types of job or job phase to use for future contract estimates

You issue payroll checks at regular intervals, probably weekly. So you may issue a large number of payroll checks every month. Your check register can become cluttered and you can lose control of it if you list payroll checks in full detail along with your routine payments.

Payroll checks require five or more columns. Unless you have a very wide register sheet, that won't leave enough columns to distribute your other payments. That makes it harder to break down routine payments for analysis. For this and the following reasons, list payroll checks in a separate check register.

- A check register should always list checks in strict numerical order. The style of most payroll checks is different from regular checks, so you need a separate number series.
- Payroll record keeping must include accurate earnings records for all employees. Controlling two functions on one check register is an invitation to error.

- A separate register for payroll lets you analyze labor costs effectively. A standard check register isn't practical as a control record and a payroll summary because the format is too limited.

■ Four Ways to Keep Separate Payroll Records

There are four common ways to keep payroll separate from other payments:

- 1) Pay a bank or an independent data service center to prepare the payroll and provide backup reports.
- 2) Issue payroll checks from the one general account and from the same check series. Checks in this account must be designed to handle payroll stub deductions.
- 3) Use the general account for both payroll and other payments, but use a special style of check with its own numbering system for payroll. Enter payroll on the check register in summary form.
- 4) Set up a separate payroll account with its own check style used only for payroll.

Use a Service

Most major banks can prepare company payrolls as well as current and year-to-date records, general ledger, summary of check entries, and all other employee records at modest cost. These services are also available from payroll service centers. Many payroll service systems also prepare quarterly payroll tax returns. They can automatically pay deposits when due and can provide employee tax reports at year-end. Banks can transfer funds out of your general account to cover payroll and tax payments if you request it, and let you know how much has been used. The cost of an outside payroll service may be justified by the convenience and time it saves.

Use Your General Account

This procedure has disadvantages. You can use a single check register and weekly payroll summaries, and write payroll on the same account as other checks. Then you use a separate register to record and analyze the details. This procedure causes confusion since the checks are issued in a single number series for all payments. Checks must be designed to pay any kind of account, including payroll. Or a separate form

must be prepared to detail gross checks and deductions for each employee. But either method makes for duplication of effort. Itemizing each payroll check must be done three times:

- 1) To write the check stub or summary of earnings
- 2) To complete the payroll register
- 3) To complete the employee's earnings record

A check designed for both payroll and regular payments is more expensive to print and is not practical in most building operations.

Use Your General Account with Special Checks

A much more practical way to handle payroll and still maintain a single account is to use a special check style with its own number system for payroll. Use this with a full pegboard system and you eliminate duplication of effort.

Use a Separate Account

Finally, you can establish a separate checking account for payroll. This isolates the payroll procedure in the general ledger from the rest of your checking. You don't have to make payroll fit a check register that was never intended for it. No other kind of bank account is as easy to keep in balance because most checks are given out in person and cashed promptly. This means you have a smaller listing of outstanding checks.

Budgeting your cash is easier with a separate payroll checking account, because you set aside a lump sum each pay period in that account for payroll only. Make deposits to payroll by writing a check before each payday from the general cash account.

You can budget for payroll taxes in one of two ways if you keep a separate account for payroll. First, you can deposit just enough in payroll to cover that week's checks. You keep a minimum balance in the account at all times. Thus payroll becomes a clearing account. At the same time, you write a check from the general account to cover payroll taxes and deposit this amount to a tax account. This third account is practical for builders, since they must pay a variety of taxes that come due all at once. You set aside funds each week for this future payment. Each deposit pays for payroll taxes for a single pay period and helps pay all other taxes as well.

The second way to budget for payroll taxes is to use the payroll account both to pay employees and accumulate payroll taxes from week to week. There is no tax account to balance each month. The payroll account builds up until taxes are payable and includes both withheld taxes and your share of employment as well as payroll taxes. Each week's deposits should cover the following:

- Gross payroll (amount paid before deductions).
- Your share of FICA — an amount equal to the total amount withheld from paychecks.
- Your liability for federal unemployment tax, state unemployment tax, and any other state or local taxes for which you are liable.

Some builders include a provision in this weekly deposit for union welfare payments and worker's compensation insurance.

Figure 11-1 shows how multiple accounts are used and how funds are transferred to the payroll and tax accounts. Deposits to these two special accounts are always made from the check register, not the accounts payable register.

Chapter 10 covered the advantage of using multiple general accounts in alternating months. The accounts payable/check register method allows a monthly balancing of the bank balance.

Time Cards

You pay employees in two main ways — by salary and by wage. When you pay a salary you pay the same amount each week or month no matter how many hours the employee puts in. Partners in partnerships and business owners in corporations generally pay themselves salaries. Partners and sole proprietors can also take draws, which are not salaries but profits withdrawn from the business. You pay wages by the hour. The hourly rate you pay your crews is often determined by union contract. Clerical workers can be salaried or paid by the hour.

Many states require that you keep time cards as a basic record to prove how many hours a wage-earning employee has worked. They are important documents in unemployment benefit disputes. Time cards also give you a basis for complete cost analyses. You can print them with the names of specific jobs or contract phases so you can easily add up the hours spent on each task.

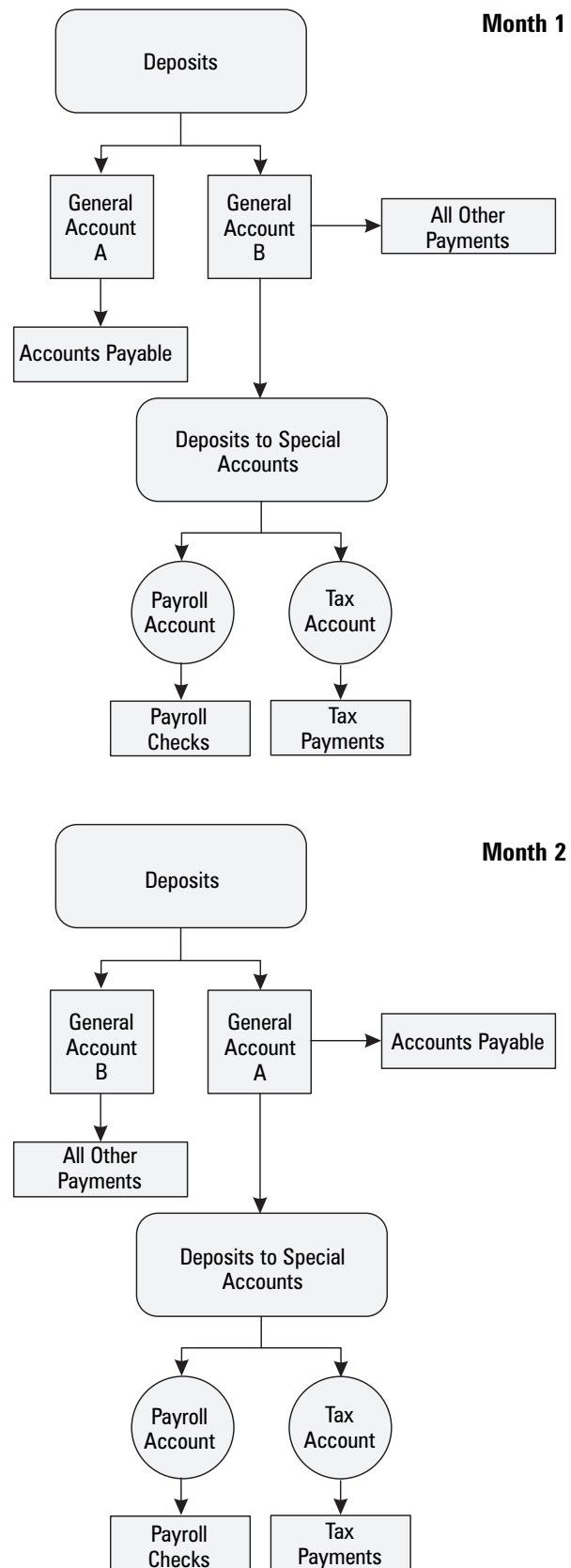


Figure 11-1
Using separate accounts for payroll and taxes

Johnson Construction Company										
Time Card										
Name _____			Employee Number _____				Week Ending _____			
Project Number	Hours Worked								Foreman's Approval	Work Description
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Total		
Total										

Figure 11-2
Typical time card

Figure 11-2 shows a time card used by Johnson Construction Company. Each wage-earning employee turns in an approved time card each week. Hours are listed by day and are broken down by project. The foreman approves the work description section and the weekly total hours for each man in his area. This doesn't take much time, and provides information for analyzing labor costs.

Johnson Construction's time card format makes each foreman responsible for his own weekly investment of labor. Field reporting can be made even more uniform. Johnson could develop a comprehensive list of job types performed in his operation. He could code each time card by type as well as by project where he thinks he needs a more detailed cost breakdown. One job type might be shop time, which could include work done on shop-fabricated components, inside repairs, and inventory-related tasks.

Idle time might be another valuable job type on time cards. Idle time is expensive. You pay for delayed deliveries, lost plans, bad weather and the time your men spend standing around. A labor cost analysis should show you how to coordinate your crews more effectively and cut down on this unproductive time. Make complete breakdowns of time card time to eliminate any hours not accounted for. Include explanations of non-work days such as paid holidays, vacations, and paid sick leave.

The foreman or field superintendent should deliver the completed time cards to the office several days before the payroll is due. Take the time to check them over and put them in a logical order. Alphabetize the time cards if the employee earnings records are kept this way. This saves time when you start writing checks. Prepare each payroll check by computing from the time card the number of hours the employee worked times the rate per hour. You figure the employee's net pay by deducting taxes from this gross amount. The time card is a very important source document, both for tax purposes and for your own labor records.

■ Payroll Checks

Payroll checks come in many styles. Checks with stubs or deduction summaries create duplication of effort. The least economical of the stubbed checks is the double-stub type like the one shown in Figure 11-3. This check is designed for businesses that require one check for all uses. The middle stub, the employee's record, is not used at all when paying non-payroll bills. You must do the following to complete payroll with this type of check:

- Fill out the employee's earnings record. Do this to determine that the employee has not reached the maximum limits on any of the limited deductions.

Date _____ P401 Paid To _____ For _____ forward deposits + this check - Balance	Employee's Record Date _____ Name _____ GROSS _____ FICA _____ Fed w/h _____ State w/h _____ Total _____ Net _____	<div style="text-align: right; font-weight: bold;">P401</div> JOHNSON CONSTRUCTION CO. 412 WARD AVENUE MIDFIELD, USA <div style="text-align: right;">_____ 20____</div> PAY TO THE ORDER OF _____ \$ _____ <div style="text-align: right;">DOLLARS</div> MIDFIELD BANK 380 EIGHTH ST., MIDFIELD, USA FOR _____ <div style="text-align: right;">00 1 234 56 789 1 234 56 789 1 2300</div>
---	---	---

Figure 11-3
Double-stub check

- Complete the check stub itself, carrying forward the balance from the previous stubs.
- Fill in the employee's record stub. The employee detaches this stub from his check and keeps it for his records.
- Write the check itself.
- Write the check register entry.

Another type of payroll method uses a regular check, as shown in Chapter 9. This procedure has as

many steps as the double-stub method and requires that an employee record called an *earnings statement* be completed as a separate step. No matter how efficiently you set up these forms, no steps can be eliminated. Figure 11-4 is a little more detailed than a double-stubbed check. It breaks down different rates of pay and shows the period covered by the check. Similar forms are available in duplicate sets in small booklets or single sheets. In many states, showing the period covered is a legal requirement.

Statement of Earnings			
Employee _____		Paid from _____	
Job Classification _____		to _____	
Hours:		Rate:	Total:
Regular _____		_____	
Overtime _____		_____	
Other _____		_____	
GROSS _____			
Deductions:		Total:	
FICA _____			
Federal withholding _____			
State withholding _____			
Disability Insurance _____			

TOTAL DEDUCTIONS _____			
NET CHECK (Check Number) _____			

Figure 11-4
Statement of earnings

Date	Name	Hours	Rate	Gross	FICA	Fed.	State	Other	Total	Net
<div style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between;"> <div> JOHNSON CONSTRUCTION CO. 412 WARD AVENUE MIDFIELD, USA </div> <div>P819</div> </div> <div style="margin-top: 10px;"> PAY TO THE ORDER OF _____ \$ _____ </div> <div style="margin-top: 10px;"> _____ DOLLARS </div> <div style="margin-top: 10px;"> MIDFIELD BANK 380 EIGHTH ST. MIDFIELD, USA </div> <div style="margin-top: 10px;"> FOR _____ </div> <div style="text-align: center; margin-top: 10px;"> 00 1234 56 789 1234 56 789 12300 </div> </div>										

Figure 11-5
Top-strip pegboard check

Some builders make out the statement of earnings in duplicate, giving the original to the employee and keeping the copy. This means that they don't keep a monthly payroll register or earnings record. They hand over copies of the statement to an accountant, who produces these two records. This means duplication of effort plus a higher accounting bill.

Many builders type each check they issue. There is a greater chance of error in any multi-step process and typographical errors will compound payroll balancing problems.

A pegboard system for payroll accounting makes the task easier because it combines multiple steps into one. You need only record the information once. However, the pegboard system is obsolete by today's standards. You can purchase automated payroll programs, install them on your computer, then quickly and easily learn how to use them. With the computerized programs available, and the affordable services offered by banks and specialized payroll-processing companies, you'll find the old processing systems are inefficient.

However, for those still faithful to the pegboard approach, Figure 11-5 shows the typical top-strip style pegboard check. Figure 11-6 shows a center-strip style, not as practical, but less work than a totally manual system.

Earnings Record

You must keep detailed and accurate earnings records for each employee to comply with the legal

and tax requirements of federal, state, and local government agencies. You need these records to determine the point at which total earnings reach maximum levels for certain types of taxes. Above these maximum limits you pay no tax, as discussed later in the chapter. Tax reports must be sent to governments and to all employees each year. State employment agencies want individual records or information from these tax reports to verify claims for unemployment benefits. Union reports and workers' compensation reports are based on earnings records.

Figure 11-7 shows the information on an earnings record. Forms are available that can handle this kind of requirement for an entire year on one page. Or you can design a form to your own specifications.

Payroll is reported for taxes annually. Keep earnings records for each employee for each year. Also keep quarterly subtotals, as payroll taxes are payable and reportable at the close of each quarter, more frequently if your payroll amount exceeds certain limits. The quarterly report summarizes all liabilities and is filed with the final payment for that period.

Payroll Register

The payroll register is the same as the check register, except that it includes the detail required for payroll checks. The columns on the payroll record are the same as those on the earnings record, but they can be designed to allow more room on the right side for cost analysis. Weekly cost analysis is discussed in Chapter 15.

PAYROLL REGISTER																							
Employee	Hours	Rate	Gross	FICA	Federal W/H	State W/H	Other Deductions	Total Deduct.	Net Pay														
Jones	37	12.40																					
Michaels	45	9.00	<div style="text-align: right; font-weight: bold;">P575</div> <div style="text-align: center;"> JOHNSON CONSTRUCTION CO. 412 WARD AVENUE MIDFIELD, USA </div> <table style="width: 100%; margin-top: 5px;"> <tr> <th>Gross</th> <th>FICA</th> <th>Federal W/H</th> <th>State W/H</th> <th>Other Deductions</th> <th>Total Deduct.</th> <th>Net Pay</th> </tr> <tr> <td>774.00</td> <td>59.21</td> <td>116.10</td> <td>14.50</td> <td></td> <td>189.81</td> <td>584.19</td> </tr> </table>							Gross	FICA	Federal W/H	State W/H	Other Deductions	Total Deduct.	Net Pay	774.00	59.21	116.10	14.50		189.81	584.19
Gross	FICA	Federal W/H								State W/H	Other Deductions	Total Deduct.	Net Pay										
774.00	59.21	116.10								14.50		189.81	584.19										
Peterson	42	14.00																					
Rogers	36	12.40																					
Vargas	43	18.00																					
Thomas	40	10.00																					
Stevens	39	12.00	<i>Five hundred Eighty-four and 19/100</i> DOLLARS																				
Weston	32	12.40	PAY TO THE ORDER OF <i>George M. Vargas</i>																				
			MIDFIELD BANK <small>380 EIGHTH ST., MIDFIELD, USA</small>																				
			<i>M.C. Johnson</i>																				
			001234 56789123456 78912300																				

Figure 11-6
Center-strip pegboard check

EARNINGS RECORD											
Name _____				Year _____				S.S. Number _____			
Address _____				Marital Status _____							
City _____				Number of Dependents _____							
Job Classification _____				Rate of Pay _____				Date Hired _____			
Date	Check	Hours	Rate	Gross	FICA	Federal W/H	State W/H	Other Deductions	Total Deduct.	Net Pay	
Total Quarter											
Year to Date											

Figure 11-7
Earnings record

PAYROLL REGISTER										
EARNINGS RECORD										
Name <u>George M. Vargas</u>				Year _____			S. S. Number _____			
Address _____				Marital Status _____						
City _____				Number of Dependents _____						
Job Classification _____				Rate of Pay _____			Date Hired _____			
Date	Check	Hours	Rate	Gross	FICA	Federal W/H	State W/H	Other Deductions	Total Deduct.	Net Pay
				P575						
				JOHNSON CONSTRUCTION CO. 412 WARD AVENUE MIDFIELD, USA						
Date	Check	Hours	Rate	Gross	FICA	Federal W/H	State W/H	Other Deductions	Total Deduct.	Net Pay
6/15	P575	43	18.00	774.00	59.21	116.10	14.50		189.81	584.19
				<i>Five hundred Eighty-four and 19/100</i> DOLLARS						
				PAY TO THE ORDER OF <i>George M. Vargas</i>						
				MIDFIELD BANK <small>380 EIGHTH ST., MIDFIELD, USA</small>						
				<i>M.C. Johnson</i>						
				001234 56789123456 78912300						

Figure 11-8
Pegboard system for recording payroll

A pegboard system makes filling in the payroll register as easy as making out the check. See Figure 11-8. Place the payroll register on the pegboard and put a piece of carbon paper over it (unless you are using a no-carbon-required transfer system). Place the employee's earnings record over this. Don't put the earnings record on the pegs but position it carefully. Make sure the earnings record is lined up so that the carbon strip on the back of the check will come through on the first unused line. Then you don't have to remove checks each time you place another employee's earnings card on the board.

Attach the check on the pegs directly over the earnings record. As you make out the check, the amounts are transferred to the earnings record. These amounts are transferred in turn through the carbon paper and onto the payroll register. The flow of payroll data and paperwork is summarized in Figure 11-9.

Accounting for Tax Liabilities

You accumulate tax liabilities in two ways: from taxes withheld from payroll checks, and from employer taxes. You pay taxes on behalf of your employees to various taxing agencies, withholding these amounts from employee checks. You also pay employer payroll taxes based on gross employee earnings. This amount is your own liability and is not withheld from payroll.

Both taxes are payable at certain intervals to federal and state governments. Familiarize yourself with the regulations and deadlines for these payments. You can't afford to ignore tax liabilities if you want to stay in business.

Although there are many ways to account for tax liabilities, the easiest method is to have two separate general ledger tax accounts. These should be

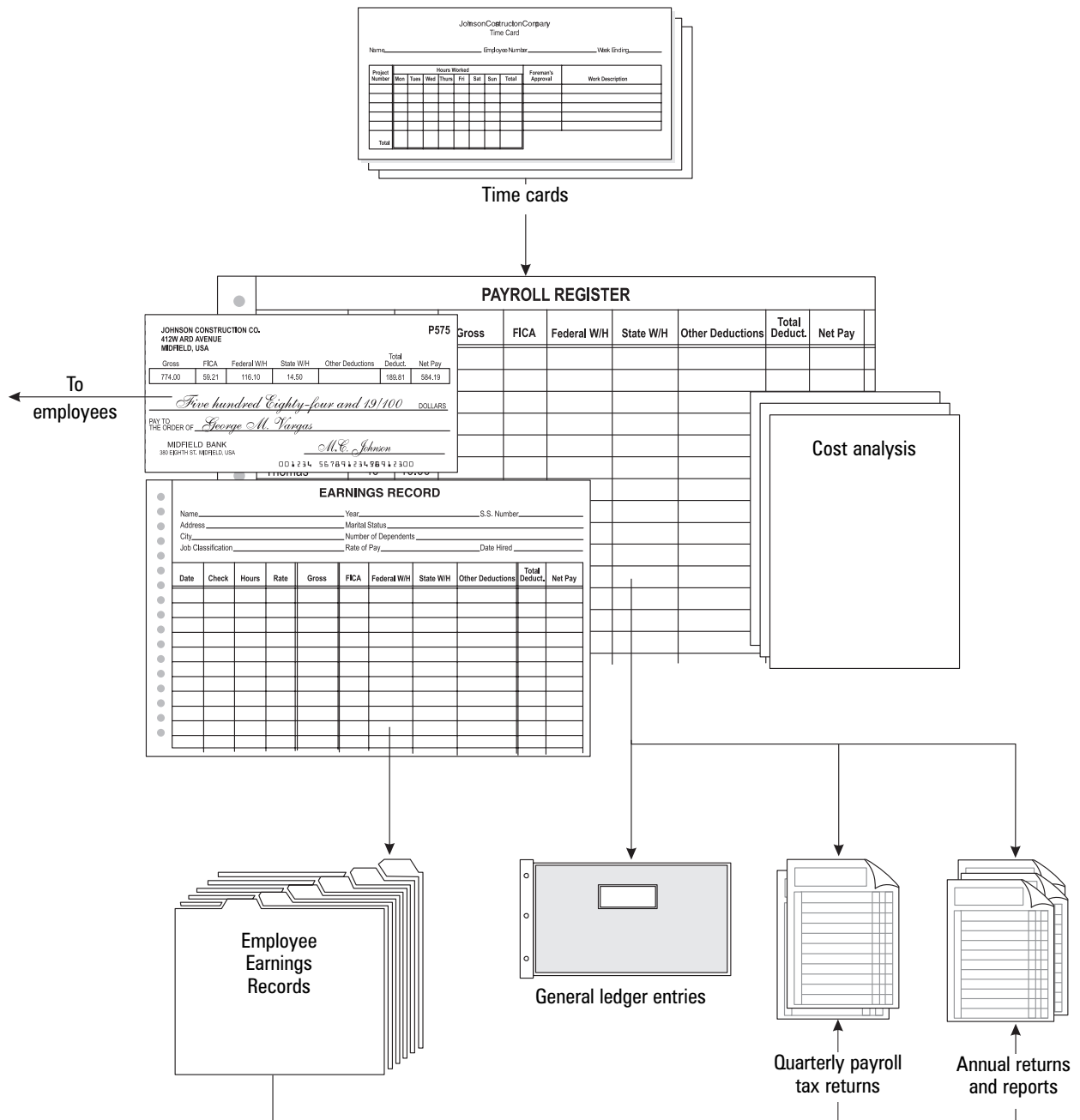


Figure 11-9
The flow of payroll data and paperwork

Gross payroll		\$5000.00
Deductions:		
FICA	\$382.50	
Federal w/h	891.00	
State w/h	197.50	
State disability	50.00	
Total deductions		<u>\$1,521.00</u>
Net		<u>\$3,479.00</u>

Liability (Clearing Account) — Payroll Taxes Withheld

Detail - accounts by type					Summary		
FICA	Fed. w/h	State w/h	Dis. Ins.		Debit	Credit	Balance
(242.00)	(560.00)	(158.00)	(40.00)	Balance forward			(1,000.00)
(382.50)	(891.00)	(197.50)	(50.00)	Current month		1,521.00	(2,521.00)
				Prior month paid:			
		158.00	40.00	State	198.00		
242.00	560.00			Federal	802.00		
(382.50)	(891.00)	(197.50)	(50.00)	Balance forward			(1,521.00)

Figure 11-10*Flow of funds through Payroll Taxes Withheld account*

called *Payroll Taxes Withheld* and *Employer Payroll Taxes Payable*. The first is a clearing account, through which taxes you withhold from employees are deposited and then paid. The second account is for employer taxes. Funds accumulate in the employer tax account until minimum deposit amounts are reached.

Figure 11-10 shows the flow of funds through clearing accounts such as *Payroll Taxes Withheld*. On a gross payroll of \$5,000.00, withholding taxes are \$1,521.00 for the current month. This amount includes the tax liability on behalf of the employees, so it is deposited in the clearing account in the current month. The current month line shows this deposit. The balance forward equals the amount of the previous month's taxes now due. Withdraw this amount to make the payment, leaving a final balance of the tax liability on this month's \$5,000 payroll. This current liability rests in the clearing account until it is due and next month's liability is added to it. Then, in its turn, withdraw it to make this month's payment. With the clearing account, you always show the liability for the current month, a month before it is due.

You compute your liability for employer taxes as in Figure 11-11. Check the latest tax schedules for up-

to-date tax rates. On the \$5,000.00 payroll, the employer's share of taxes totals \$577.50. Employer taxes are due only on payroll reaching certain maximums. Figure 11-11 assumes that all employees are under these maximums when the current payroll is paid. These maximums, or limits, are discussed later in the chapter.

Figure 11-12 summarizes the entries you make to record employer payroll taxes. The total amount of these taxes is an expense to the employer and accumulates in the payroll taxes expense account. Also shown is the tax liability. Break down this liability into the same categories as withheld taxes.

Payments to taxing agencies clear the employer's liability account. But the liability account doesn't clear every month, since a liability is included for federal unemployment insurance. This tax is payable only when the total liability exceeds \$100.00. If the liability is less than that at the end of each quarter, no entry is made to clear the account.

You must make payroll tax deposits by certain deadlines or you may face penalties and interest. Deadlines for state taxes vary from state to state. The

Gross payroll		\$5000.00
Deductions:		
FICA	\$382.00	
Federal w/h	891.00	
State w/h	197.00	
State disability	50.00	
Total deductions		\$1,521.00
Net		\$3,479.00

Liability - Employer's Payroll Taxes Payable

A) FICA - An amount equal to amount withheld	. \$382.50
B) State unemployment tax - state's prevailing rate times gross payroll.	
Example: 3.6% x \$5,000.00	.180.00
C) Federal unemployment tax - Federal prevailing rate times gross payroll.	
Example: 0.08% x \$5,000.00	.40.00
Total Employer's Payroll Taxes	.\$602.50

Figure 11-11
Computing your tax liability

	Payroll Taxes		Tax Liability	
	Debit	Credit	Debit	Credit
Balance forward	\$1,545.00			\$442.00
Current month	602.50			602.50
Prior months paid:				
State (the offsetting entry is to "cash")			\$144.00	
Federal (the offsetting entry is to "cash")			249.50	
Balance forward	\$2,147.50			\$651.00*
* The "Tax Liability" balance forward consists of:				
FICA payable, current month				\$382.50
State unemployment insurance payable, current month				180.00
Federal unemployment insurance payable, year-to-date				88.50
Balance forward				\$651.00
(Note: Federal unemployment insurance liabilities are deposited when the amount is over \$100.00)				

Figure 11-12
Recording employee payroll taxes

Payroll Tax Limits - Worksheet							
Name	Gross Earnings			State Limits			
	Prior Y.T.D	Current quarter	Y.T.D	Under 7,000	Over 7,000	Under 14,400	Over 14,400
Andrews	10,600	4,200	14,800		4,200	3,800	400
Beecher		3,750	3,750	3,750		3,750	
Carey	3,100	3,910	7,010	3,900	10	3,910	
Dunlap	7,950	4,100	12,050		4,100	4,100	
Emerson	5,100	4,400	9,500	1,900	2,500	4,400	
Freeman		2,700	2,700	2,700		2,700	
Grant	7,700	3,700	11,400		3,700	3,700	
Johnson, A.	12,000	6,000	18,000		6,000	2,400	3,600
Johnson, B.	8,800	4,400	13,200		4,400	4,400	
	55,250	37,160	92,410				
Payroll subject to tax				12,250		33,160	
Payroll exempt from tax					24,910		4,000
Tax for quarter:							
Rate				3.6%		1.0%	
Amount				\$441.00		\$331.60	

Figure 11-13
Worksheet for payroll taxes

federal tax is paid according to your liability in the past. Liabilities under \$500.00 don't have to be paid until the end of the quarter. If your total taxes withheld and owed exceed that amount, you may have to make deposits monthly or semi-weekly, depending on your level of tax liability.

In most cases, you make your deposits of payroll taxes directly to your bank. The Internal Revenue Service provides each employer with a set of data processing cards for this purpose. Your check is made payable to the bank and must accompany this card. Make sure you use the card for the correct quarter and for the tax you are paying. Taxes you can pay at the bank include federal unemployment tax, payroll taxes, income tax (for corporations), excise tax, and any other taxes payable by deposit. Use a Form 501 for monthly or quarterly payroll tax deposits. Deposit federal unemployment taxes with a Form 508. These rules may change at any time, so read your tax circulars and keep up with the changes.

Payroll Tax Limits

All payroll taxes except income tax are subject to limits. These taxes are not payable on wages and salaries above certain amounts for the current year. These amount limits change from time to time and vary in different states. Your calculations of the taxes you owe must take these limits into account.

Figure 11-13 is a format you can use each quarter to complete your payroll tax forms. Use it to calculate how much tax you owe considering the "under" and "over" limit. Of course, to construct your own worksheet, you'll need to review your state's payroll tax limits, and also federal tax and FICA levels. The worksheet provides an example using only state taxes. In this hypothetical case, the following limitations have been applied:

- State unemployment taxes (employer's taxes) are payable on all wages under \$7,000.

- State disability insurance (employee tax withholding) is assessed against the first \$14,400 of wages.

Each two-column set has to balance with total earnings being reported in the period. (If it doesn't balance, there's an error to find.) Compute the proper taxes owed using payroll records for each classification of tax.

- 1) *Subtract* the prior year-to-date gross earnings for each employee from the limit amount in each tax category. In the state limit column, this is \$7,000 and \$14,400 for state unemployment taxes and disability insurance, as just mentioned. In the federal limit column, the limit amounts \$6,000 and \$16,500 are for federal unemployment taxes and FICA.
- 2) If you get zero or a negative number, the entire current quarter's gross amount for that employee is over the limit and is *not* taxable.
- 3) If you get a positive number, some part of that employee's current quarter gross earnings is under the limit and is taxable.
- 4) If you get a positive number that is greater than the current quarter's total, the entire amount of the employee's earnings is under. If the positive number is smaller than his current quarter's gross, put down as over only the amount that brings the prior earnings up to the limit. For example, assume the following about an employee for whom you are computing your tax on a \$7,000 limit:

Prior earnings:	\$6,000.00
Current quarter	1,500.00

The taxable amount under the limit is \$1,000 (\$7,000 less \$6,000 = \$1,000). The non-taxable amount over the limit is \$500 (\$1,500 less \$1,000). To prove the accuracy of the computation, add \$6,000 (previous) to \$1,000 (current amount under). This equals \$7,000, the amount of the limit.

Payroll Forms

The federal government publishes several forms for payroll taxes. Be familiar with each of them and know how they apply to you. Form W-4 is the *Employee's Withholding Allowance Certificate*. This form must be completed by each employee. It documents the amount of tax to be withheld from his gross pay. It's your only source for this information. Even

employees who will not be liable for any taxes should fill one out, as it supplies information you need to complete year-end reports required by law.

Form W-4 includes the following information: the full name and address of the employee, Social Security number, marital status, and number of exemptions. Keep a file of all W-4s. Any time there's a change in marital status, number of exemptions or address, make sure the employee completes a new W-4.

Tax tables used to compute withholdings are arranged by marital status, with columns for the number of exemptions. If any employee is married and claims three exemptions, his weekly payroll would be subject to the federal tax listed on the weekly table under Married, exemption column 3.

File a Form W-2, Wage and Tax Statement, every January for each employee. Use the W-2s to report the employee's wages and taxes in summary for the preceding year. Distribute the six copies of the form as follows.

- *Copy A* — To the Social Security Administration. The W-2s for all employees are summarized on Form W-3, Transmittal of Income and Tax Statements.
- *Copy B* — To the employee to file with his or her federal income tax return.
- *Copy C* — To the employee for his records.
- *Copy D* — Kept by the employer for his records.
- *Copy 1* — To the state taxing agency. Summarized on the state version of a Form W-3.
- *Copy 2* — To the employee to file with his state tax return.

Use quarterly and annual forms to report wages and pay taxes. Form 941, *Employer's Quarterly Federal Tax Return*, summarizes taxable wages and provides for payment of any income taxes or FICA due. This form also requires you to list your tax liabilities and deposits. Liabilities you must list on Form 941 include FICA tax withheld, FICA tax (employer's share), and federal income taxes withheld.

Form 940 is an annual report used to pay federal unemployment taxes. This form summarizes the yearly taxable wages and computes the maximum for state unemployment taxes. A federal credit is allowed if the state rate is higher than the federal rate. Otherwise, the difference between state and federal rate is payable. This effectively makes unemployment taxes uniform throughout the country.

Summarized below are the federal tax forms most builders need for their payroll accounting.

- *Form W-2* — Filed annually, with copies sent to the Social Security Administration, state taxing agencies, and the employee.
- *Form W-3* — Filed with W-2s as a summary form.
- *Form W-4* — Completed by each employee to indicate taxable status and address. It helps the employer comply with legal requirements.
- *Form 8109* — Used to deposit federal FICA unemployment, and withholding taxes with local banks.
- *Form 508* — Used to deposit federal unemployment taxes with local banks.
- *Form 940* — Used once each year to report and pay federal unemployment taxes.
- *Form 941* — Used once each quarter to report and pay FICA and withholding taxes.

There are also information returns you must file each year. These aren't actually payroll forms, but they have similar formats and are completed at the same time as the annual payroll information returns. Form 1099 is mailed to individuals receiving certain

types of income from builders. Some types of payments to include on your 1099 are dividends or interest over \$10.00 in one year, and rents, commissions, and other types of miscellaneous income over \$600 you pay someone other than your material suppliers. All of your Form 1099s must be summarized on a Form 1096, which is the transmittal form.

Here's one important point to keep in mind regarding payroll accounting: The specific rates change from one state or county to another, and the federal (and state) rates are likely to change each and every year. With indexing of insurance and tax rates for payroll withholding, it would be unusual for any of the percentages or numbers to remain stable from one year to the next.

Payroll accounting requires a large number of records. You need to keep records adequate for preparation and payment of payroll itself, for identification of payroll taxes due, for preparation of quarterly payroll tax forms, and for preparation of year-end information and tax returns. In addition, payroll records may be used for other purposes, including accounting entries, workers' compensation insurance billings, census reports, and union benefit calculations and payments.

Test Questions:

1. No matter how many employees you have, the following records are essential parts of your payroll records:

- A. Canceled checks from suppliers for jobs on which employees work.
- B. Income records showing justification for having full-time crews on the job.
- C. Detailed earnings records, general ledger entries, job breakdowns, and copies of payroll tax returns.
- D. Bank reconciliations showing records of all outstanding checks at the end of each month.

2. When budgeting for payroll expenses, you need to remember the following in addition to gross pay:

- A. Employer portions of all payroll taxes.
- B. Other deductions, like union dues.
- C. The timing of payroll tax deposits with federal and state collecting agencies.
- D. All of the above.

3. When you have crews working on several different jobs, it's helpful to design time cards to show:

- A. Foreman approval for all crew time spent on each job.
- B. A breakdown of gross and net pay.
- C. A breakdown of all hours spent on each job.
- D. A summary of payroll taxes by job number.

4. An employee's individual earnings record is:

- A. A breakdown by job for the entire year.
- B. A breakdown of dates, gross pay, and all deductions for each employee, along with Social Security number, marital status, dependents, and pay rates.
- C. A worksheet to determine when the maximum has been reached for deductions.
- D. A record the employee keeps to verify that your calculations of pay are correct.

5. Payroll accounting includes entries to:

- A. The purchases journal and income journal.
- B. The general ledger only.
- C. The payroll journal only.
- D. The employee earnings record and the general ledger.

6. The employer's liability is:

- A. The payroll taxes you, as employer, have to withhold from your employee's check, and then pay to the government.
- B. The amount of payroll taxes you have to pay above what you take from the employee's check.
- C. The combined employer and employee taxes due to be paid to the government.
- D. The amount of liability insurance you have to pay to protect against employees being injured on the job.

7. The federal unemployment insurance liability is paid:

- A. As part of the FICA deduction each pay period.
- B. At the same time as other federal taxes are due, through periodic deposits and with a quarterly tax return, on Form 941.
- C. Periodically when the liability exceeds a specified level, and reported once per year on an annual return, on Form 940.
- D. To the federal government by each state.

8. The Form W-2, Wage and Tax Statement, is:

- A. A form each employee fills out when hired, showing the number of dependents and marital status, address, and Social Security number.
- B. A form filled out quarterly to report to the government how much is due in taxes.
- C. A form sent to each employee at year-end and to the Social Security Administration, to report taxable income and taxes paid.
- D. A form filed by an employee with the Internal Revenue Service when an employer doesn't send him a year-end summary of earnings.

9. Form 1099 is used:

- A. To report payments such as interest and consulting fees.
- B. To report payrolls above \$100,000 per year.
- C. To report information reported incorrectly on Form 1096.
- D. To request additional blank forms from the Internal Revenue Service forms center.

10. The total payroll tax liability consists of:

- A. Withholdings from employee checks.
- B. Withholdings from employee checks, plus the employer's payroll taxes due.
- C. All taxes in "B" above, plus the insurance premium due for worker's compensation insurance.
- D. Only federal and state income taxes, and not other deductions.

11. If you have a large number of employees, it makes sense to use:

- A. Your accountant's staff to figure your payroll.
- B. An outside service or efficient in-house payroll software.
- C. A pegboard system for payroll.
- D. A combination manual/pegboard system for payroll.

12. A payroll tax limits worksheet is handy for:

- A. Determining how much to pay each employee.
- B. How much tax to withhold based on maximum tax levels.
- C. Reducing the time required to process payroll checks and related records.
- D. Payments of required deposits with a bank.

13. The federal tax rates:

- A. Are set by Congress and can never be changed.
- B. Have remained unchanged for many years.
- C. Are subject to periodic adjustment based on current law.
- D. Are summarized in IRS publication W-2.

14. Periodic payroll tax deposits are usually made:

- A. To the Internal Revenue Service.
- B. To your employee's bank.
- C. To your accountant.
- D. To your bank.

15. You're required to have each employee fill out a form W-4, which is the:

- A. Employee's Withholding Allowance Certificate.
- B. Name and address form for use in case of an emergency.
- C. Hourly rate and beneficiary name form.
- D. Federal unemployment tax form.

Overhead Expenses

Previous chapters examined direct costs, which vary with sales. But overhead expenses tend to remain fairly constant in spite of changes in your sales volume. Every builder has overhead expense. In this chapter, we'll take a detailed look at the overhead expense categories you should include in the general ledger. We'll also explain the difference between variable and fixed overhead expenses.

Budgets serve as a measure against which you operate. Without budgets, your company doesn't have a financial road map. Many builders ignore the importance of general expense budgets. You probably think general expenses are uncontrollable. This chapter will show you how to control what may appear to be inevitable. In truth, most expenses can be controlled within a reasonable budget. The control you exercise is a measure of your effectiveness as the manager of your business.

■ Variable and Fixed Overhead

Earlier in this book I explained the distinction between selling expense (a variable overhead expense) and fixed overhead. Selling expenses (commissions and advertising, for example) usually vary with sales. Your fixed overhead (rent, phone, and so on) are fairly uniform whether sales go up or down. The difference between direct costs and overhead expenses is that direct costs are identified with a project. Variable overhead expenses are not associated with any single job, though they vary with sales volume.

For example, there's a difference between labor (a direct cost) and union welfare expense (a variable expense). The labor that goes into a project is a necessary part of the production process. It generates income. The union welfare paid on that labor is once removed from the generation of income. It doesn't produce sales. Yet it's a necessary expense of doing business. It's variable because the expense varies according to the cost of producing that income with labor. Overhead expenses such as office rent are fixed. No

Variable Expenses

Payroll Taxes
 Taxes - Other:
 Federal Excise Tax
 Licenses
 Permits and Fees
 Public Utilities Fees
 State Fuel Tax
 State Income Tax
 Automotive, Repairs and Maintenance
 Automotive, Gas and Oil
 Operating Supplies
 Small Tools
 Equipment Rental
 Union Welfare
 Insurance
 Collection Expenses
 Bad Debts
 Travel and Entertainment
 Miscellaneous Variable Expenses

Fixed Expenses

Salaries and Wages
 Payroll Taxes
 Taxes - Other:
 Federal Use Tax
 Property Taxes
 Vehicle Registration
 Office Supplies
 Postage
 Printing
 Insurance
 Telephone
 Utilities
 Dues and Subscriptions
 Accounting and Legal
 Consultants' Fees
 Rent
 Depreciation
 Amortization
 Advertising and Promotion
 Security
 Interest
 Building Maintenance
 Miscellaneous Fixed Expenses

Figure 12-1
Variable and fixed expenses

matter what volume and direct cost a business may experience, rent remains unchanged over the term of the lease.

Define expenses as variable or fixed according to how much that expense is influenced by sales volume. Variable expenses, while not a direct part of the production process, vary broadly with sales. Fixed expenses aren't related to sales and direct costs, and don't vary with changes in volume and gross profit. Because of these differences, variable expenses are controllable only as far as sales and direct costs are controllable. But management can directly control fixed expenses. Figure 12-1 is a summary of variable and fixed expenses.

Some expenses can be both variable and fixed, depending on their definition. For example, payroll taxes on direct labor are variable expenses; payroll taxes on office salaries are fixed.

The following is a list of expenses incurred by most builders. Some expense titles appear more than once as they're both fixed and variable. You could set up your general ledger in the same order as the list.

Then observe the categories precisely when you code expenses. Otherwise it will be impossible to compare expense categories from month to month.

Variable Overhead Expenses

Payroll Taxes This includes all taxes computed as the employer's share based on direct labor, as opposed to payroll taxes on office salaries. This expense is variable overhead because it's directly influenced by changes in the amount of construction labor required.

Taxes, Other Keep track of variable taxes in detail because they must be listed individually on income tax returns. These taxes include federal excise tax (computed on fuel and varying by the amount of sales volume in most areas), permits and fees, public utility fees (based on a business truck use), state fuel tax (varying by consumption), and state income tax (varying by the amount of profit).

Automotive, Repairs and Maintenance This includes all repairs, replacement parts, and other maintenance to company vehicles.

Automotive, Gas and Oil This includes gas and oil used by highway vehicles.

Operating Supplies This includes wrapping materials and any other incidental items used out of the office but required for doing business rather than for working on a project.

Small Tools Any tool purchase should be included here unless the value is high enough to treat as an asset. Treatment is usually determined by the purchase price. Some equipment costs little and isn't worth depreciating so it's categorized as "small tools." This expense can vary with the volume of sales.

Equipment Rental This category should vary according to the special needs of certain projects. Equipment rented or used exclusively on job sites is a direct cost. An example of indirect equipment rental would be leased autos or trucks, or shop equipment you use for all jobs.

Union Welfare All pension and trust fund payments by an employer are variable because direct labor cost is the basis for measuring the amount due. Direct labor cost varies with business volume.

Insurance Certain types of insurance are variable because they relate to specific jobs or labor functions. Some types of insurance vary with the volume of sales and should also be considered as variable.

Collection Expenses Fees paid to agencies and other costs of collection are included in this category. These are variable expenses because collection costs usually change with changes in volume.

Bad Debts Like collection expenses, the amount of bad debts is likely to be affected by volume.

Travel and Entertainment Travel and entertainment expenses are limited to those costs that are necessary for the generation of income. They're considered to vary with income. Builders operating over a wide area have meal and lodging expenses as well as car rental costs. These are all travel expenses. Be sure to document entertainment expense and specify its business purpose.

Miscellaneous Any other variable operating expense.

Fixed Overhead Expenses

Salaries and Wages This includes payroll for officers, estimators and clerical employees. The amount is fixed because these expenses aren't necessarily related to sales.

Payroll Taxes All payroll taxes on income to company officers and office personnel are fixed. They don't vary with sales or direct costs.

Taxes, Other This includes all non-variable taxes such as property taxes (on real estate or equipment and inventories not directly related to income) and vehicle registration fees (a fixed expense of doing business).

Office Supplies This amount includes all consumable supplies used in your office. The cost of purchasing a pegboard accounting or check-writing system would be an office expense.

Postage This account probably won't vary with minor changes in volume. A significant increase in postage expenses would occur if you mailed advertising flyers or took on a lot of new work in a short period.

Printing This includes all letterhead, envelopes and business cards. Printing expense usually remains fairly steady regardless of sales volume.

Insurance This account should include all insurance on fixed-cost items. For example, the cost of insurance on premises, the contents, and health insurance for officers would be fixed expenses.

Telephone This is another controllable expense which may vary with changes in sales volume. But it's usually defined as fixed because most phone calls are local, and are included in the basic monthly charge. With recent changes in rate structures, users can choose between a higher base rate with free toll calls, or a lower base rate where calls that were previously free become toll calls.

Utilities This expense doesn't vary with volume. It's generally a cost associated with operating office and warehouse areas.

Dues and Subscriptions This includes all memberships, dues, subscriptions, books and periodicals. It has no direct relationship to sales volume.

Accounting and Legal These fees don't vary significantly with income. All accounting and legal fees are administrative costs rather than selling expenses. An increase in these costs would not necessarily be due to an increase in sales.

Consultants' Fees This includes all one-time outside consulting fees. There are a variety of types of consultants. Any fee that relates entirely to a job or several jobs (such as a soils engineer) is a variable cost and should be included with variable costs under Direct Costs, Other. Consulting fees of a general nature belong here — a computer systems analyst, for example.

Rent This includes rent and storage expenses for the general office, shop or warehouse, and any leased buildings or land.

Depreciation This includes all depreciation on trucks and autos, construction equipment and capitalized office equipment, as well as buildings you own.

Amortization This category is for writing off leasehold improvements, organizational expenses, and any other capitalized asset being amortized. The expense does not relate directly to sales or to the cost of sales.

Advertising and Promotion This is usually a limited expense for builders. Any advertising or promotion of your business in general that isn't sales related (such as your ad in the yellow pages) falls into this category. Include help-wanted classified advertising here also.

Security Most builders need to protect their inventories and job sites. The cost of protecting these investments belongs here.

Interest This includes any interest paid on bank loans, notes and other obligations. Interest on construction loans associated with a particular project would be direct costs. But most loans are used for working capital and don't apply to specific projects.

Building Maintenance This includes all current and minor expense associated with maintaining an owned office and shop, such as repairing a leaking roof, doing plumbing repairs, or painting. Leasehold improvements, by comparison, are capitalized.

Miscellaneous Include here any other expense that doesn't relate to sales volume or the direct cost of those sales.

Budgeting Expenses

Since expenses are fairly predictable within ranges of business volume, they can be budgeted. The budget is your guide to making the work your company does pay off in acceptable profits. A realistic budget establishes the profit and is the expense standard you plan to observe. The budget is, of course, only a tool. It's the people in your company who control expenses. So think of your budget as your guide to profits.

The budgeting process has three parts:

- 1) Preparing the budget
- 2) Analyzing the results
- 3) Taking action to control expenses

The plan must be realistic or the entire budget is useless. Base your budget on past results and your estimate of reasonable expectations. A budget can be fairly accurate if it allows for price changes and anticipated changes in business volume. Your budget can become a real guide to savings and profits, but only if it meets these requirements. First, it's both realistic and possible to live with. Second, your analysis is frequent and probing enough to spot problems early. Finally, you have to take the action required to correct problems.

The goal of a budget isn't to forecast as accurately as possible what expenses will be. Rather, the budget should establish the ideal level of expense and income in a well-controlled operation. Comparing your budget to actual performance will reveal areas where your budget was unrealistic or your company could improve its performance in the future. Analyze over-budget costs to identify areas where money is wasted.

Budget Analysis

Budget analysis requires accurate books and records and detailed cost information. Because you don't always receive bills at the same time each month, leave some leeway for month-to-month variations. Monitor expenses over several months and you should begin to find areas where savings are possible.

Controlling expenses requires a definite plan. Review each expense category and look for ways to keep the expense level down. You probably already have policies that are aimed at reducing costs. Examples of this would be limiting employee raises with annual reviews to a percentage of their pay, requiring prior approval for certain types of general expenses, careful checking of invoices, and maintaining a log to monitor long-distance telephone calls. Keep a list of the methods and techniques that are effective in minimizing the expenses in your operation. This should include monthly analysis of detailed entries to certain accounts.

Figure 12-2 shows an expense analysis form. The components of the office supplies account have been split into the various categories. You see immediately where the cost savings have occurred and where costs have exceeded the budget.

Pay special attention to troublesome cost areas. Correct cost overruns before more time goes by and expenses mount. After the analysis of office supplies in Figure 12-2, the builder or his office manager might want to see all requisitions for supplies before

Expense Analysis - Office Supplies

September, 20_____

Description	Total	Papers and Worksheets	Rubber Stamps	Pencils, Pens, etc.	All Other
Midfield Stationery	\$37.80	\$24.75	\$13.05		
Jim's Office Supply	\$76.50	\$26.50			\$50.00
Jim's Office Supply	\$42.00	\$42.00			
Petty Cash	\$8.44			\$8.44	
Total month	\$164.74	\$93.25	\$13.05	\$8.44	\$50.00
Previous year-to-date	\$806.00	\$418.05	\$76.50	\$72.60	\$238.85
Year-to-date total	\$970.74	\$511.30	\$89.55	\$81.04	\$288.85
Year-to-date budget	\$600.00	\$450.00	\$50.00	\$75.00	\$25.00
Variance	(\$370.74)	(\$61.30)	(\$39.55)	(\$6.04)	(\$263.85)
		1.14	1.79	1.08	11.554

Figure 12-2
Expense analysis

they're ordered. Make sure the goods being purchased are really needed and used. The receptionist or bookkeeper may not be as concerned about budgets as you are. You might decide that you or your office manager should preapprove office supplies purchases over \$50.00. You might also want to put a time limit on this requirement, to prevent abuses to the system. (Someone could place orders twice a week for \$49.95 each!)

It is obvious from Figure 12-2 that a detailed analysis of All Other is needed. Most of the excessive cost falls into this category. This is a common problem in analyzing books and records. There isn't always enough detail on summary reports to be fully revealing, but the last line in this one shows quite a lot. Using the formula $1 - (\text{Variance} \div \text{Budget})$, you can see that All Other ran more than 11.5 times its budget.

$$(1 - (-263.85 \div 25) = 11.554)$$

Preparing Your Budget

There are two ways to prepare budgets. Use one method for variable expenses and the other for fixed

overhead. Budgets for variable expenses should be prepared as a percentage of income within broad ranges. As your volume changes, your variable expenses will change, but the percentage of each expense category to sales should remain within certain limits. The problem with this approach is that no dollar amounts are included in the budget. There is a tendency to skip over significant variances, blaming them on the level of sales rather than on internal control of expenses.

Another approach for variables would be to set budgeted amounts for expenses based on assumptions about the level of sales or labor. This method requires several budgets. You would analyze any variance from the budget for the sales volume closest to actual volume to find the reason for the discrepancy.

Prepare your monthly budget for fixed expenses a year in advance. You can estimate most of the expense categories fairly accurately based on the past year's experience. Set optimistic but also realistic goals. The budget becomes a guideline against which you measure performance each month.

[illegible]

Figure 12-3
General ledger page with sub-accounts

General Ledger Accounts

Efficiency and accuracy are essential in maintaining general ledger accounts. The more accounts your company has, the more time it takes to post and control the ledger. Yet you need enough detail to provide a meaningful breakdown of expenses by category. Two major sections are essential for the general ledger: variable expenses and fixed expenses. Variable expenses can also be called selling expenses. So your financial statement reflects a selling profit:

Gross sales - Direct costs = Gross profit
Gross profit - Selling expense (variable costs) = Selling profit
Selling profit - Overhead (fixed costs) = Net profit

Within variable and fixed cost categories, keep each account and sub-account individually. This doesn't necessarily mean that each account requires a page of its own. Your general ledger would be too awkward for effective control.

There are two types of account pages recommended for expense classifications. The first is illustrated in Figure 12-3. This is a page for one account with sub-accounts listed to the left. Keep accounts like insurance and taxes as shown in Figure 12-3.

The second method is shown in Figure 12-4. This is ideal for most expense categories. Only a few pages like this are enough to handle all the variable expense accounts most builders would have. In these examples, all accounts are listed individually but controlled in summary. This saves posting time and works as a control feature. Each line is balanced on that page itself so no errors slip through. This is important because it's much harder to find and correct mistakes as time passes.

The principal difference between Figures 12-3 and 12-4 is in the detail provided. Most expense categories don't require the detail sub-accounts shown in Figure 12-3. You can break down some accounts into sub-accounts and leave others intact. Remember, the general ledger loses its effectiveness when it includes

too much detail. Be sure that breakdowns are truly needed. The ledger isn't the proper place to perform detailed analysis. But it is your tool for summarizing your business transactions.

You should be able to handle all your accounts on a few pages. The collection just recommended has five pages of variable expense accounts and four pages of fixed overhead expense accounts.

Using Ratios

- Budgeting is only one way to analyze overhead costs. You can sharpen your understanding of company overhead by comparing the overhead costs you have to other figures. Since overhead expenses are divided into two broad categories, any combined ratio analysis won't be as meaningful as an analysis of individual items. The two ratios that are most significant to a builder in analyzing his overhead are:

- Fixed Expenses*

- The comparison of expenses is made to *sales* because there's less chance for distortion than if you compared expense categories to total costs. If you compare variable expenses to direct costs, or fixed expenses to direct costs, any deviation in normal costs (such as losses in inventory or idle labor time) would distort the results.

Figure 12-5 is a worksheet Johnson Construction used to determine the trend of variable expenses to gross sales. In this example, the variable expenses are based on the accrual accounting method. Compare variable expenses for the month to sales for the

Analysis of Variable Expense Trend
For the year 20__

	Current Month			Twelve Month Average		
	Expense	Income	Ratio	Expense	Income	Ratio
January	7,481	27,560	1 : 3.7	6,281	29,612	1 : 4.7
February	7,077	29,401	1 : 4.2	6,407	26,401	1 : 4.1
March	7,411	26,811	1 : 3.6	6,499	26,880	1 : 4.1
April	8,496	31,004	1 : 3.6	7,762	28,416	1 : 3.7
May	8,219	27,960	1 : 3.4	8,105	27,206	1 : 3.4
June						
July						
August						
September						
October						
November						
December						

Figure 12-5
Worksheet for analyzing variable expense ratios

month, and expenses for the last twelve months to sales for the same period. Update the twelve-month average each month.

For example, as of May 31, the comparisons would be:

- 1) May variable expenses to May earned income
- 2) Variable expenses for twelve months ending May 31 to earned income for twelve months ending May 31.

These ratios are calculated using this formula:

$$\text{Comparison ratio} = \text{Income} \div \text{Expenses}$$

Maintain a separate worksheet to chart the twelve-month averages for an entire year. See Figure 12-6.

Find the reasons for any unfavorable trend in the ratio. The reports by themselves are useless unless you can reverse the trend. There could be many reasons for relative increases in variable expenses. Price increases could be part of the cause, and your

company's charges might not be keeping pace with your costs. There might be other causes as well. For example, equipment expense might be higher now than five months ago. This could indicate a lack of organization in assignments or the purchase of unnecessary equipment.

Each expense item should be important in your analysis. Compare expenses in different periods. When there's a major difference in expenses, you should know what caused that difference, and respond appropriately.

You can do a similar analysis for fixed expenses, but the result is less significant than the analysis of variable expenses. Since variables change more than fixed expenses in relation to sales, you measure those in percentage trends.

The control of fixed expenses depends entirely on your effectiveness as a manager. A comparison of fixed expenses to sales should show only a steady ratio if volume remained constant, an increase of the ratio with increased sales, or a narrowing of the ratio with decreased sales.

**Variable Expenses to Sales Ratios
Twelve Month Average**

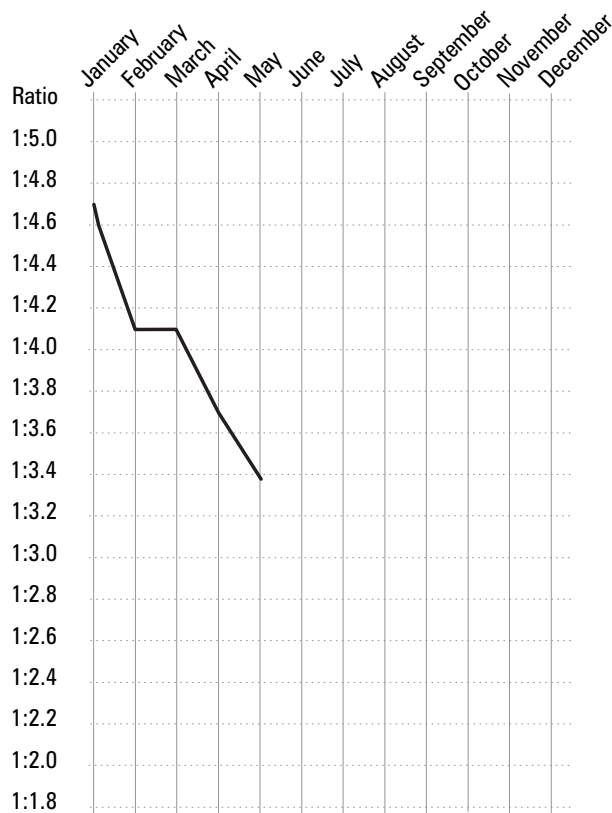


Figure 12-6
*Worksheet for charting twelve-month sales
and variable expense ratios*

But this doesn't tell you much. The best way to control fixed overhead is to make careful monthly comparisons of budget dollar forecasts to the actual results. Identify trends as they develop to rein in a rise in expenses. Comparison of actual expenses to the budget is illustrated in Figure 12-7. In this example, budget expenses are listed month by month. If you budget expenses for the whole year, rather than for each month, it's easy to blame unfavorable trends on timing differences. That's not enough. Instead, find the cause for current overspending. Document the reasons for variances from the budget. This is a helpful way to remind yourself of the danger of uncontrolled spending.

Next year when you're trying to control expenses and maintain an expense budget, think how helpful it would be to have a monthly summary of this year's expenses — along with the remedies you found for overspending.

Recording Expenses

Expenses are recurring in most cases. That is, they occur month after month in generally set patterns. For example, rent is predictable and payable at about the same time every month. Office supplies, if paid on account, may be payable the same day of each month. Sometimes expenses are recorded before they're paid, as an accrual. At the end of the accounting month, expenses incurred but not paid are accrued by recording a liability. So the profit and loss statement for that month shows the expense in the month that the liability exists. The entry to accrue an expense would be:

	Debit	Credit
Expense	xxx	
Accounts Payable		xxx

When the account is paid, the entry would be:

	Debit	Credit
Accounts Payable	xxx	
Cash		xxx

Accounts Payable for this expense item is returned to zero. The effect is the same as though a cash payment had been made in the first place.

This kind of entry should be made at the close of the first month in which the expense is known and the value has been received. You will have liabilities like this every month because current liabilities aren't always billed and paid the same month value is received.

Another way to record expenses in a period other than when paid is to set up a prepaid asset. An example of a prepaid asset would be an annual insurance premium. The policy is paid by a single payment at the beginning of the policy year. The balance must be deferred on your books until it's earned. For example, a July payment of \$120 would be set up as a prepaid asset and deferred through each month to the following June. This is illustrated in Figure 12-8, which also shows the treatment for a single payment covering 36 months.

The entry to record a prepayment such as insurance is:

	Debit	Credit
Prepaid Assets	xxx	
Cash		xxx

		Fixed Expenses - Budget Analysis For the year 20_____											
		Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec
Postage	Budget	14	18	18	13	15	15	18	16	15	18	21	11
	Actual	17	14	17	17	12							
	Variance	(3)	4	1	(4)	3							
Printing	Budget	85	44	45	120	55	—	35	50	—	100	35	18
	Actual	—	25	72	—	210							
	Variance	85	19	(27)	120	(155)							
Insurance	Budget	145	145	145	145	145	165	165	165	165	165	165	165
	Actual	158	158	158	163	163							
	Variance	(13)	(13)	(13)	(18)	(18)							
Telephone	Budget	38	38	38	38	41	41	41	41	45	45	45	45
	Actual	28	32	29	37	36							
	Variance	10	6	9	1	5							
Utilities	Budget	57	57	57	53	44	44	35	35	35	38	41	44
	Actual	57	59	61	55	41							
	Variance	—	(2)	(4)	(2)	3							

Figure 12-7
Fixed expense budget analysis

The entry to record each month's charges is:

	Debit	Credit
Insurance	xxx	
Prepaid Assets		xxx

This kind of accounting lets your books carry the proper amount of expense in each month. The examples given involve only small amounts, but prepaid insurance plus other types of expense (office supplies, printing, and so forth) can add up to a significant amount. Set up payments for large expenses which apply over a defined period and recognize a portion each month.

Still another way to treat expenses is to capitalize them as deferred assets. Prepaid and deferred assets are often thought of as the same thing. But there is a difference. Prepaid assets defer recognition of an expense until value is received for that expense. A

deferred asset might be a one-time charge. An example of this might be organizational expense.

The cost of organizing a business can be high. The cost should not be charged against the first year of operations. Instead, you should set up in an asset account, *Organizational Expenses*, and write off the cost over a period of years. This process of spreading costs over a period of years is called *amortization*. It's handled like depreciation. You charge an amount to an expense category each month, and reduce the asset by the same amount.

Another distinction between the two types of assets is that prepaid assets could be considered current assets while deferred charges usually aren't current. That is, they aren't likely to go to zero in the next twelve months. To avoid confusion, both accounts are normally included in the balance sheet classification as *Other Assets*.

	12-month prepayment	36-month prepayment
Year 1		
July	\$10 (\$120 paid)	\$8 (\$288 paid)
August	10	8
September	10	8
October	10	8
November	10	8
December	10	8
Year 2		
January	\$10	\$8
February	10	8
March	10	8
April	10	8
May	10	8
June	10	8
July		8
August		8
September		8
October		8
November		8
December		8
Year 3		
January		\$8
February		8
March		8
April		8
May		8
June		8
July		8
August		8
September		8
October		8
November		8
December		8
Year 4		
January		\$8
February		8
March		8
April		8
May		8
June		8

Figure 12-8
Prepaid insurance schedule

Test Questions:

1. Fixed overhead expenses are typically:

- A. Predictable or very similar from one month to the next.
- B. Always exactly the same because they're fixed by contractual obligation.
- C. Fixed as to due date, but varying in amount.
- D. Tied in exactly to sales levels and therefore fixed on a percentage basis.

2. Variable expenses are typically:

- A. Unpredictable because they can't be controlled and will change entirely due to circumstances beyond anyone's control.
- B. Directly tied to each job and will vary predictably with job activity.
- C. Not directly affected by sales volume, but inclined to vary with changes in sales.
- D. Of a similar amount each month, but will vary depending on expense controls you practice.

3. Budgets are most valuable when:

- A. They're handled automatically, so no one has to follow up on them.
- B. They show that you'll make a large profit, so you won't have to watch your expenses.
- C. They are used to actually control expenses and profits, including monthly review and control activity on your part.
- D. They are managed strictly by your accountant, so you aren't required to review them every month.

4. The sequence of costs and expenses in the general ledger is usually:

- A. Direct costs, fixed expenses, variable expenses.
- B. Direct costs, variable expenses, fixed expenses.
- C. Variable expenses, direct costs, fixed expenses.
- D. Variable expenses, fixed expenses, direct costs.

5. Ratios are useful tools for analyzing overhead expenses because:

- A. Overhead expenses come out of computerized accounting systems as ratios.
- B. They are figured out on a computer, so they tend to be dependable and accurate.
- C. Your accountant computes them, so they are highly accurate.
- D. They translate pure numbers into more easily understood versions of your records.

6. An unfavorable trend indicates that:

- A. You are losing money and that the competition is probably too strong.
- B. Something is occurring that needs to be corrected as soon as possible.
- C. There is something wrong in the numbers and the ratio should be figured again.
- D. Your accountant probably made an error when doing your annual budget and forecast.

7. An analysis of fixed expenses compared to sales should show:

- A. A steadily rising percentage of fixed expenses when sales are rising, because fixed expenses tend to accelerate in periods of high volume.
- B. A steadily falling percentage of fixed expenses when sales are rising, because fixed expenses are generally fixed by amount.
- C. A steady and consistent percentage when sales are rising, because fixed expenses are associated directly with and fixed by sales.
- D. A level of overhead completely unrelated to sales, since there is no comparison of any validity between sales and fixed expenses.

8. The entry to accrue an expense involves:

- A. A debit to the liability account and a credit to the expense account.
- B. A debit to the expense account and a credit to cash.
- C. A debit to the expense account and a credit to the liability account.
- D. A debit to the liability account and a credit to cash.

9. The entry to reverse an accrual involves:

- A. A debit to the liability account and a credit to the expense account.
- B. A debit to the expense account and a credit to cash.
- C. A debit to the expense account and a credit to the liability account.
- D. A debit to the liability account and a credit to cash.

10. You would use the prepaid asset account to record:

- A. Monthly expenses for an expense paid all at once at the beginning of the period.
- B. Monthly expenses paid in advance due to an error.
- C. The expensing through depreciation of a part of a capital asset's value.
- D. The down payment made on a fixed asset.

11. Direct costs differ from variable and general expenses in the sense that:

- A. Direct costs are paid directly to the vendor.
- B. Direct costs can't be controlled like expenses can, since they're directly affected by sales volume.
- C. Direct costs are classified in a different section of the ledger by your accountant.
- D. Budgets for direct costs are far more important.

12. A realistic budget establishes:

- A. Profit and expense standards you plan to observe.
- B. Future expansion based on your creditworthiness.
- C. Sales volume.
- D. Cash flow requirements for the coming year.

13. The periodic budget analysis reveals:

- A. Mathematical errors in your budget.
- B. How sales and direct costs interrelate.
- C. Your likely tax liability at the end of the year.
- D. Which expenses are over or under their budgeted level.

14. Typical of budgetary controls you can initiate are:

- A. Review of office supply expenses at the end of the month.
- B. Review of requisitions in advance of placing orders.
- C. Reclassifying troublesome expenses as direct costs.
- D. Recoding of expenses over budget to expense categories under budget.

15. Variable expenses are best budgeted as:

- A. A fixed amount split evenly through the year.
- B. An amount that varies seasonally.
- C. A fixed percentage of sales within a broad range.
- D. An arbitrary level, since they cannot be controlled.

Equipment Records

The largest single investment that most builders make is for equipment. Your equipment is a fixed or long-term asset because you usually hold it for more than a year. You list your equipment on your balance sheet at its cost and depreciate it over its estimated life. The act of setting up an asset in the general ledger is called *capitalizing*. Capitalizing an expense sets up an asset which is taken or booked as an expense over a period of several years. In contrast, most other expenses are taken in the month payment is due or the month paid.

Tax regulations don't let a business write off large equipment purchases in a single year. This is because the useful life of that equipment is longer than the year in which it's purchased. To take expense for a purchase over the life of the asset is to *depreciate* it. Generally you minimize your taxes in the current year if you depreciate equipment as quickly as the tax regulations permit. But this isn't always the best policy, as this chapter will show.

Fixed assets aren't actually fixed, so the term *long-term asset* is often used. This is more accurate because it describes an asset with a long useful life. It also distinguishes these assets from current assets such as cash and accounts receivable. This distinction is very important in the balance sheet because you can't readily convert long-term assets to cash as you can current assets.

Long-term assets that you buy with borrowed money are listed at their total purchase price, even if you still owe your bank the major portion of the asset value. You show the liability as a long-term debt. The part of that debt that's payable within twelve months is recorded separately and called a *current liability*.

Current assets are expected to flow into cash within a year; current liabilities include anything that is payable within one year. The entry to record a \$15,000 purchase of a fixed asset with \$12,000 financing (assuming payments of \$100 per month) would be:

	Debit	Credit
Equipment	\$15,000	
Cash		\$3,000
Current note		\$1,200
Long-term note		\$10,800

This entry shows the full amount of the purchase price as an asset, the true value to the builder. The note is divided into current (the amount due within one year) and long-term portions. Any payments on the note reduce the long-term portion. The current portion stays the same each month. As each month passes, the current period is extended so that the current amount payable is always equal to twelve months of total payments.

The well-organized builder should have a definite plan for fixed assets:

- A budget for acquisition of equipment and a complete knowledge of the planned use
- An established standard for return of investment in fixed assets. How many worker hours will a new piece of equipment save and how much will it cost to own and operate it?
- A study of alternatives. Would it be better to lease or buy new equipment?
- Dependable and complete asset records (serial numbers, costs, acquisition dates)
- Records of maintenance costs and idle time
- A policy establishing depreciation rates
- An identification system for all fixed assets, either by labels, tags or etched numbers
- A goal for maximum use of fixed assets including scheduling, minimizing idle time, and a maintenance policy
- An estimate of the expected future market for the builder's services and the fixed assets required to meet that volume level

Have a clear picture of your own equipment needs and plan for them. Planning makes the purchase of a major piece of equipment a normal business process. Without a plan, the unexpected need for a replacement could delay your work. Investments tied up in unplanned major spending can affect your ability to meet payroll and other commitments.

With a plan, you can compare your expectations about a fixed asset purchase to the actual results of having that asset. This should help you see whether the investment is a wise one. Equipment is a necessary

part of your operation. But it should save employee time, make your operation more competitive and speed up completion of your jobs. Most important, the investment should not impair your ability to meet your obligations.

■ Classifying Fixed Assets

Your balance sheet should show enough detail to reveal the true position of your business. Lumping several asset categories into one total obscures your investment in any single part. The following balance sheet categories are typical of what most builders should use to classify their fixed assets.

- *Office furniture and equipment:* Includes all desks, chairs, file cabinets, tables, computer equipment, typewriters, adding machines, and fixtures.
- *Trucks and autos:* Includes delivery vehicles, automobiles and any vehicle used in the general operation of the business.
- *Machinery and equipment:* Covers a wide range of assets including construction equipment, tools, specialty machinery, and equipment kits.
- *Small tools:* Many tools are included under machinery and equipment. Use this category for smaller, nonmechanical tools such as hand sets and small appliance tools. As a general rule, these aren't capitalized because of their low cost and likelihood of frequent replacement.
- *Building:* Includes any structure owned by the company, excluding the land value.
- *Improvements:* Includes any renovation or addition to structures owned or leased.
- *Land:* Includes the value of any land owned by the company. This asset must be kept separate from all others since tax law excludes it from depreciation rules.

All long-term assets (except land) are depreciated. The improvements classification is subject to amortization. This distinction is subtle. Depreciation is the recognition of the cost of an asset over a period of its useful life. Amortization is the process of spreading the cost. So, where depreciation uses up the value of an asset, amortization spreads the expense over a period of time. For example, you would amortize the cost of improving leased office space over the term of the lease.

Fixed Asset Summary
September 30, 20_____

Description	Gross Asset	Accumulated Depreciation	Net Asset
Office Furniture and Equipment	\$1,280.00	\$450.00	\$830.00
Trucks and Autos	86,419.60	31,004.82	55,414.78
Machinery and Equipment	14,200.00	3,480.00	10,720.00
Small Tools	900.00	200.00	700.00
Building	62,500.00	21,800.00	40,700.00
Improvements	1,360.55	311.12*	1,049.43
Land	35,000.00	—	35,000.00
Total	\$201,660.15	\$57,245.94	\$144,414.21

*Amortization

Figure 13-1
Reporting assets on a balance sheet

There are several ways to list assets on your balance sheet. The least desirable is to lump all depreciation together after finding a subtotal. No distinction is made as to which assets are depreciated and to what extent:

Office furniture and equipment	xxx
Trucks and autos	xxx
Machinery and equipment	xxx
Small tools	xxx
Building	xxx
Improvements	xxx
Land	xxx
Total Gross Assets	xxx
Less: Accumulated Depreciation	xxx
Net Fixed Assets	xxx

Undesirable as this method is, it's commonly used. That's because many companies don't set up their books to keep track of the accumulated depreciation by each asset type. Since accumulated depreciation is a negative asset (actually, a reduction of fixed assets), the yearly expense to depreciation is accumulated in this account. It's easy to record depreciation by category. Rather than making a two-line journal entry, debiting the expense and crediting reserve, the entry should look like this:

	Debit	Credit
Depreciation expenses	xxx	
Accumulated depreciation		xxx
Office furniture		xxx
Trucks and autos		xxx
Machinery and equipment		xxx
Small tools		xxx
Building		xxx
Amortization expense	xxx	
Accumulated amortization		xxx

Figure 13-1 shows the most compact and informative way to report assets on a balance sheet. Totals are given for the total accounts, fixed assets, accumulated depreciation, and the gross and net totals in each category.

Controls on Equipment Purchases

You should establish a procedure for processing in new equipment. The procedure you follow should only take a few minutes. But it will provide all the information you need later. It's easy to forget to record these details when you buy new equipment and

Equipment Record

Description _____

Company Number _____ Classification _____

Size _____ Model _____ Style _____ Engine No. _____

☐ New ☐ Used Serial Number _____

Purchased from _____

Date of Purchase _____ Terms _____

Location of Property _____

Cost Information:

Price	
Tax	
Delivery Charges	
Installation Costs	
Other	
Total	

Date Sold _____ Sold To _____

Sales Price:

Gross	
Tax	
Total	

Machinery

Small Tools

Building

Figure 13-2
Equipment record

difficult to compile some of this information later when you really need it. The record you maintain for each fixed asset should include the following:

- Identification (manufacturer and description)
- Assigned company number (if any)
- Classification of the asset (small tools, office equipment, etc.)
- Model, serial, and engine numbers
- Whether the asset is new or used
- The seller

- Date of purchase
- Location of the asset
- Cost information in detail

Maintain this information in a file or equipment record book that becomes the basis for analyzing fixed assets. It supports all general ledger entries for equipment.

Figure 13-2 illustrates Johnson Construction Company's equipment record. Keep these forms in a file indexed by classification of asset. This provides both an easy reference and valuable historical data.

Schedule of Equipment Time					
Unit	Company No.		Month		
Day	Job No.	Scheduled Time	Hours Operated	Idle Time	Repair Time
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Figure 13-3
Schedule of equipment time

In addition to your record of equipment acquired, you should develop detailed records for:

- Equipment utilization
- Control of maintenance cost
- Depreciation

Your equipment purchase plan must include a number of key considerations. Provide adequate insurance coverage. The equipment must be adequately productive to cover its cost. It must be budgeted and affordable. On key pieces of equipment, keep a utilization schedule that records time assigned to specific jobs. You should also have a secondary plan, since equipment can break down at any time.

Figure 13-3 is a schedule of equipment time. Prepare a schedule like this for each piece of high-value equipment, as far in advance as possible. A worksheet like this is essential to help you allocate and plan equipment use. You could prepare separate schedules for each job by piece of equipment.

Unit Cost for Equipment

Establish an hourly cost for high-value equipment. This requires certain information about each piece of equipment:

- Estimated average hours of use and idle time

Figure 13-5 shows an analysis for a four-week period (always 160 hours). The period for analysis should always be the same length so that no allowance needs to be made for a greater number of

Equipment Cost Assignment

For the month of August 20_____

Unit	Company #	Job #667	Job #671	Job #674	Repair Time	Idle Time	Total*
Delivery Truck #6	AT-0024	32	17	64	14	33	160
Delivery Truck #8	AT-0027	14	26	70	35	15	160
Delivery Truck #9	AT-0030	26	31	92	—	11	160
Power Tool Kit	ME-0007	52	84	22	—	2	160
Power Tool Kit	ME-0008	10	16	109	6	19	160
Total		134	174	357	55	80	800

Cost Analysis

Total percentage	17	22	45	6	10	100
Operational percentage	20	26	54			100
Total operational hours	134	174	357			665
Repair and idle time	27	35	73			135
Total hours by job	161	209	430			800

*Month is actually four working weeks

Figure 13-5*Equipment cost assignment*

hours in one month. While actual expenses occur on a calendar basis, they can be applied to jobs on a four-week basis. One common method of allocating costs over uniform periods uses eight four-week months and four five-week months. For example, the first quarter would have 13 weeks. The whole 365-day year would look like this:

January	January 1 to January 28
February	January 29 to February 25
March	February 26 to April 2 (five weeks)
April	April 3 to April 30
May	May 1 to May 28
June	May 29 to July 2 (five weeks)
July	July 3 to July 30
August	July 31 to August 27
September	August 28 to October 1 (five weeks)
October	October 2 to October 29
November	October 30 to November 26
December	November 27 to December 31 (five weeks)

The equipment cost assignment worksheet provides an hourly summary by job and shows the rela-

tive efficiency of equipment use. It also lets you set a standard for equipment use. The idle and repair time figures indicate the degree of efficiency at which equipment is working.

Depreciation

Depreciation is designed to let businesses “recover” (charge against income) the cost of buildings and equipment over the useful life of that property.

Writing off part each year spreads the cost over a period of time. Up to 1981, that period was referred to as “useful life.” With passage of the Economic Recovery Tax Act of 1981, the idea of depreciation was replaced with “recovery” and the entire system of depreciation was replaced with the Accelerated Cost Recovery System (ACRS). Then in 1986 the entire system was reformed again, with the current rules dictated by the Modified Accelerated Cost Recovery System (MACRS). Assets placed into service after 1986 are subject to MACRS rules.

How to Claim Depreciation

There are several ways to claim depreciation. Under MACRS rules, you may use a prescribed method, or elect to use one of several straight line alternatives. But assets you began depreciating under the old rules can continue under the old method until depreciation (or recovery) has been completed.

Questions you must ask before you begin to depreciate an asset are:

- 1) Is the asset depreciable? You can't claim depreciation on land, inventory, or intangible property.
- 2) Are you entitled to a depreciation deduction? The tax law states that you're entitled to the deduction only if you suffer the economic loss as a result of decrease in value due to use. In most cases, the one who suffers the loss is the owner of the equipment. But under some circumstances you'll be allowed depreciation on equipment you *lease*.
- 3) What is the basis for depreciation? In most cases, the basis is the same as your cost.
- 4) When was the property placed into service? You begin depreciation during the year you begin to actually use property, not necessarily in the year it is purchased or paid for.

The MACRS system dictates the depreciation periods you're allowed to use for each specific class of asset. The depreciation periods, called *recovery periods*, specify the time over which you can claim depreciation for that class of asset.

Before MACRS, the concept of useful life was a determining factor in the number of years depreciation would apply. The true useful life of an asset was a primary factor in deciding how long a life the asset had for purposes of depreciation.

In many cases, property actually appreciates in value. So the concept of useful life and depreciation doesn't truly reflect book value. If you own your own building for example, it's probably worth more today than when you bought it — even though you've depreciated the structure down to zero.

You're allowed to use the prescribed MACRS method, which allows for a greater amount of depreciation in the earlier years, and a decreasing amount later on. Or you may elect in most cases to use an alternative straight line method of recovery. You claim the same amount of depreciation every year for a specified number of years. At the end of that period, the asset will be fully depreciated.

In deciding which method to use, there are several factors you should consider:

- 1) What overall effect will your decision have? You must elect to use the prescribed or optional method for *all* assets placed into service for each class life within any one year.
- 2) How important is future depreciation to you? If you expect higher net profits in future years, you may come out better with straight line depreciation. But if you need the expense this year, the prescribed method may be best.
- 3) Get the advice of your accountant. Use a trusted professional's advice in setting your policy for depreciation.
- 4) Obsolescence plays an important role in deciding how to depreciate assets. On the one hand, you want to consider the true useful life. On the other, the tax code restricts how aggressively you can write off your capital investment.

It's usually best to design a depreciation policy (within IRS guidelines) that most closely reflects your use and replacement of equipment. If you use a lot of equipment that declines in value very quickly, accelerated depreciation is probably more accurate. If you replace equipment frequently because of increasing repair and maintenance costs, using the prescribed method of depreciation may be best for you.

Once an asset has been fully depreciated (that is, the depreciation claimed to date equals the basis), it's either removed from the books altogether, or left in place. There are several ways for builders to handle adjustments for fully-depreciated assets.

Removing a fully-depreciated asset from your books isn't good practice. Even though it has been fully expensed, it's still an asset of the company. Don't take it off the books until it's sold, traded or abandoned.

Once you do dispose of an asset, credit the value in the asset account and reverse the entry for your depreciation reserve:

	Debit	Credit
Accumulated Depreciation	xxx	
Fixed Asset		xxx

There are two ways to record depreciation. Both of these are acceptable ways to record the expense. In the first, you make an entry for the part of the year you first own an asset. For example, an asset purchased on

July 1 would receive exactly one-half year's depreciation during the first year. The second method would be used by builders who buy and sell a number of assets during a year. A full year's depreciation is taken on assets purchased between January 1 and June 30. Assets purchased between July 1 and December 31 aren't subject to depreciation until the following year. The weakness of this method is that the recorded cost of doing business is distorted if purchases and sales of assets weren't spread fairly evenly over the year.

Other Depreciation Records

If you have a substantial investment in fixed assets such as buildings, equipment or machinery, you'd better maintain your asset records as well as you maintain your equipment. Complete records for repairs and maintenance, hourly usage, insurance cost, and depreciation are essential. Surprisingly, even established builders who've been in business for years have a difficult time breaking down their accumulated depreciation by units. As a result, fully-depreciated assets no longer in use remain on the balance sheet.

Equipment asset accounts you carry should be backed up by subsidiary records to substantiate the components of each balance. Few small- to moderate-sized operations can support their general ledger accounts. Yet this is a relatively easy set of records to maintain. It makes the difference between a clean set of books, and records that can't be explained at all.

You can maintain good depreciation records in only a few minutes each month. Your records should include complete cost data from the purchase date of the equipment to the present. The depreciation record should balance with the total of the *Accumulated Depreciation* account in the general ledger and with the depreciation expense account for the current year to date.

Figure 13-6 is a depreciation record form used by Johnson Construction Company. The company keeps a sheet like this for each fixed asset it owns. These forms are filed in a binder by classification of asset, similar to the filing system introduced earlier for equipment records. Each asset should have a separate page for recording depreciation. But you can use a single page to cover small tools bought in bulk. You can attach a second page, itemizing the various pieces that make up the one asset being depreciated. For practical purposes, each single purchase should be considered one depreciable asset.

A form like Figure 13-6 lets you compute depreciation far in advance. Simply check the "booked"

column each month to find that month's figure for the depreciated value. Then, to control the journal entry, compute the total of all depreciation calculated for the current month by category of asset. This way you know that the current month's entry is correct.

If depreciation has been computed reliably and fairly, this record also serves as a signal when the assumed useful life of an asset is coming to an end. Analyze repair and maintenance bills to discover if the cost of operation is getting high enough to justify buying a replacement.

Depreciation Methods

There are two ways to depreciate assets. Not all of these are appropriate for depreciating new equipment, although you may continue to use older methods on equipment that's held over from prior years. These methods include straight line depreciation and declining balance depreciation.

Straight Line Depreciation

Straight line depreciation is a way to spread the cost of an asset evenly over its useful life. The same amount of depreciation is taken each year until the depreciable base is reduced to zero. An asset worth \$8,000 with an estimated useful life of ten years and no salvage value would depreciate \$800 per year. If the same asset had a salvage value of \$1,000, the depreciable total of \$7,000 would be depreciated at the rate of \$700 per year.

You figure the amount of straight line depreciation by dividing the depreciable base by the useful life. In the example above, the total of \$8,000 is divided by the useful life of ten years.

$$\frac{\$8,000}{10} = \$800$$

If the useful life was estimated to be eight years, the formula would be:

$$\frac{\$8,000}{8} = \$1,000$$

This can also be expressed as a percentage. A ten-year life can be expressed as: "10 percent of the depreciable base." An eight-year life could be expressed as "12.5 percent of the depreciable base."

Accelerated methods recognize the greatest loss of equipment value earlier in the useful life on the assumption that the decline in value will be less in the asset's later years. Use the straight line method for assets that you assume will be as productive near the end of their useful life as they are in the beginning. Also consider repair and maintenance cost and the cost of obsolescence. Equipment that will require progressively more maintenance as it ages should be put on an accelerated depreciation schedule.

An example of straight line depreciation is illustrated in Figure 13-7. Assuming a ten-year life, each

Declining Balance Depreciation

Declining balance depreciation is especially appropriate in the construction industry because most new heavy equipment loses most of its market value fairly quickly. Automotive and mechanical assets depreciate right after purchase, even though the true

Straight Line Depreciation

Useful life, 10 years

Each year's depreciation is 10% of the depreciable base

Depreciation:

First year	.....10% of base
Second year	.....10% of base
Third year	.....10% of base
Fourth year	.....10% of base
Fifth year	.....10% of base
Sixth year	.....10% of base
Seventh year	.....10% of base
Eighth year	.....10% of base
Ninth year	.....10% of base
Tenth year	.....10% of base

Figure 13-7*Example of straight line depreciation*

value of that asset to the builder changes very little. You reflect much more closely the true market value of equipment and machinery when you use declining balance depreciation. Under this method, a large amount of the original value is claimed in the early years of an asset's estimated useful life.

To calculate declining balance depreciation, the first step is to calculate the straight line depreciation, ignoring any salvage value:

$$\frac{\text{Full cost}}{\text{Useful life (years)}} = \text{Straight line depreciation}$$

The second step is to increase the straight line depreciation by the declining balance percentage selected. There are several percentages used with declining balance depreciation — 125 percent, 150 percent, or 200 percent:

$$\text{Straight line depreciation} \times \text{Declining balance percentage} = \text{Declining balance depreciation}$$

Under the straight line method, the depreciable base never changed. But under the declining balance method, the depreciable base is reduced each year by

the depreciation taken up to that time. The adjusted value is used to compute the next year's depreciation:

$$\text{Full cost} - \text{This year's depreciation} = \text{Adjusted depreciable base}$$

This method is illustrated in Figure 13-8. The 200 percent rate is the most common rate used in declining balance depreciation. Declining balance depreciation allows expensing amounts much higher than the straight line rates during the early years. The depreciation taken during later years is considerably less. You load most expense into the early years of an asset's life.

If you expect assets to be subject to higher maintenance costs in the later years of useful life, straight line depreciation would result in steadily increasing cost. Depreciation would remain level throughout the term, but higher maintenance costs in the later years would raise costs significantly. As a result, the unit cost of the equipment would increase as the equipment became less valuable.

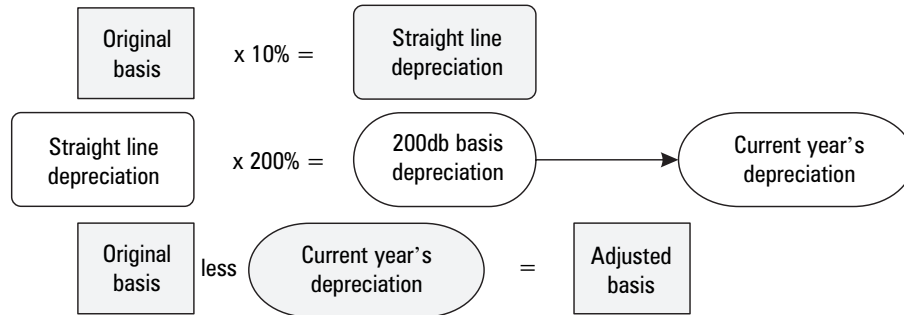
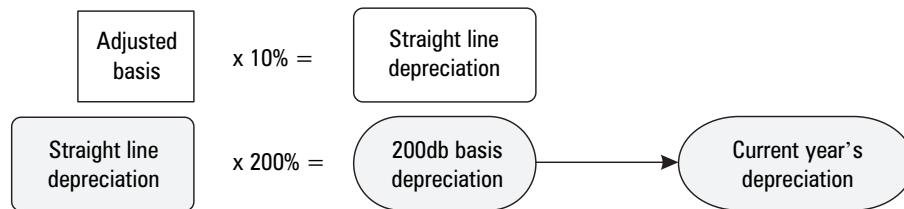
The declining balance method, if applied through each year in the recovery period, will always leave some residual value. In the past, that would be the estimated salvage value. Under today's MACRS rules, the entire asset is depreciated. IRS declining balance tables revert to straight line for the final years in the recovery period.

Which Method Is Best?

There are advantages and disadvantages to each method of depreciation. At best, depreciation is only as good as the estimate of useful life and the proper distribution of the cost. And that depends entirely on your guess. There's no way to know the exact value of fixed assets. You've got to use averages. But there are enough distinctions between the two principal methods that you should be careful to pick the right one for your particular application.

The most appropriate method depends on the type of asset being depreciated. A comparative summary of the principal types of depreciation is shown in Figure 13-9. Assuming a ten-year life and a depreciable value of \$60,000, the yearly depreciation is listed for straight line, 200 percent, 150 percent, and 125 percent declining balance methods.

Assume that you sell the equipment depreciated in Figure 13-9. If the sales price is higher than the depreciated value you're currently carrying on your

1st year**2nd year**

*Assuming a 200% declining balance method and a 10-year life

Figure 13-8
Declining balance depreciation

books, you have a gain that recaptures part of the depreciation. But be aware that depreciation in excess of the actual decline in value often creates tax problems when the asset is sold. Your accountant should be able to advise you on the best method for your situation.

For complete financial reporting, it's always a good idea to list in detail both the total value of assets in each category and totals for depreciation in each category. Refer back to Figure 13-1. Any significant difference in the various depreciation methods being

used should be footnoted. For example, footnotes for Figure 13-1 might be:

Office furniture is depreciated on a straight line basis, with a remaining life of seven years (average).

Machinery and equipment and small tools are depreciated on a 200 percent declining balance basis, with a remaining life of four years (average).

Office building is depreciated on a straight line basis, with a remaining life of 32 years.

Improvements are being amortized over five years.

Year	Straight Line*	200% DB*	150% DB*	125% DB*
1	6,000	12,000	9,000	7,500
2	6,000	9,600	7,650	6,563
3	6,000	7,680	6,503	5,742
4	6,000	6,144	5,527	5,024
5	6,000	4,915	4,698	4,396
6	6,000	3,932	3,993	3,847
7	6,000	3,146	3,394	3,366
8	6,000	2,517	2,885	2,945
9	6,000	2,013	2,453	2,577
10	6,000	1,611	2,085	2,255

* Assuming a depreciable value of \$60,000 and a 10-year life

Figure 13-9
Comparative depreciation schedules

This kind of complete disclosure is rarely needed, but you should include enough in footnotes to indicate that a major portion of remaining depreciation for various assets will be realized in a specified period of time.

Class Lives Under MACRS Rules

The following *class lives* are specified under MACRS rules:

- 3-year class — for assets that previously had a useful life of four years or less.
- 5-year class — including computers, typewriters, photocopiers, automobiles, light trucks, and telephone switching equipment.
- 7-year class — office furniture and equipment, for example.
- 10-year class — assets with previously categorized lives between 16 and 19 years.
- 15-year class — assets with lives between 20 and 24 years.
- 20-year class — assets with lives of 25 years or more.
- 27.5-year class — for residential real property including rental manufactured housing
- 31.5-year class — nonresidential real property

In the 3, 5, 7 and 10-year classes, the MACRS prescribed method involves using double-declining balance depreciation for the first part, then reverting to straight line for the balance of the period. The 15- and 20-year classes employ 150 percent declining balance, then revert to straight line. And the 27.5 and 31.5-year classes are allowed to use straight line depreciation only.

Figure 13-10 shows the annual percentages you depreciate under what's called the "prescribed method" of depreciation. It means that the 200 percent accelerated depreciation rate is used in the early years, reverting to straight-line depreciation in the later years.

Figure 13-11 shows an alternative method of applying the 150 percent accelerated method, with reversion to straight-line depreciation in the later years. You can make an irrevocable election to use this method instead of the 200 percent method. This election has to be applied to all property within a specific class and for the year that assets were placed in service. Your decision to use the 150 percent method in place of the more common 200 percent method is a matter of tax planning. The right decision depends upon your need

Year	3-yr. Class	5-yr. Class	7-yr. Class	10-yr. Class
1	33.33	20.00	14.29	10.00
2	44.45	32.00	24.49	18.00
3	14.81	19.20	17.49	14.40
4	7.41	11.52	12.49	11.52
5	—	11.52	8.93	9.22
6	—	5.76	8.92	7.37
7	—	—	8.93	6.55
8	—	—	4.46	6.55
9	—	—	—	6.56
10	—	—	—	6.55
11	—	—	—	3.28
12	—	—	—	—

Figure 13-10

Summary of depreciation percentages

for a deduction in the current year versus the anticipated need in future years. Before you decide to switch, you should discuss the benefits of each method with your tax advisor.

You can also elect to use straight-line depreciation for property. Straight-line is required for residential and nonresidential real estate, but not for most other classes. You might determine that straight-line makes more sense because you believe the deduction will be more valuable in later years, for example, than in the first few years. The election is irrevocable, so make it only after you consult with your accountant. The decision to use the straight-line method is applied to all property within a class placed into service during the year. The number of years of straight-line depreciation varies; you'll need to consult your accountant for this election and for the applicable recovery period.

You can make another important election — to "expense" property placed into service in a year. That means you write off a lump sum instead of taking the deduction over a number of years. To qualify, you have to meet a few rules:

- The property has to be placed into service during the year in question.
- The election has to be made with the original tax return filed, or on an amended tax return filed by the original due date including extensions.
- Once you make the expensing election, a reversal requires permission from the IRS.

Year	5-yr. Class	7-yr. Class	10-yr. Class	12-yr. Class	15-yr. Class	20-yr. Class
1	15.00	10.71	7.50	6.25	5.00	3.750
2	25.50	19.13	13.88	11.72	9.50	7.219
3	17.85	15.03	11.79	10.25	8.55	6.677
4	16.66	12.25	10.02	8.97	7.70	6.177
5	16.66	12.25	8.74	7.85	6.93	5.713
6	8.33	12.25	8.74	7.33	6.23	5.285
7	—	12.25	8.74	7.33	5.90	4.888
8	—	6.13	8.74	7.33	5.90	4.522
9	—	—	8.74	7.33	5.91	4.462
10	—	—	8.74	7.33	5.90	4.461
11	—	—	4.37	7.33	5.91	4.462
12	—	—	—	7.33	5.90	4.461
13	—	—	—	3.66	5.91	4.462
14	—	—	—	—	5.90	4.461

Figure 13-11

*General and alternative depreciation system
with 150% declining balance*

You can't expense property held 50 percent or less for business; property held for investment; property you purchased to lease to others; property used outside the United States; property used for lodging; and some other restrictions that generally wouldn't apply directly in a construction business. The expensing provision is currently limited to a maximum of \$19,000 in property per year.

Partial-Year Depreciation

Another rule you have to observe is that depreciation is adjusted according to the time of the year the property is placed into service. There are three methods available, and it's important to pick the right one for the class of property. The most straightforward of the three is called the "half-year convention." This method assumes that all property is acquired halfway through the year. The amount claimed equals the first year depreciation reduced by one-half (representing half of the year).

The second method available is called the "mid-quarter convention." Under this method, depreciation is assigned as though the property was acquired halfway through the applicable quarter. If you're on a

calendar tax year, all property acquired between January 1 and March 31 would be depreciated as though it were acquired around February 15 (halfway through the quarter). Depreciation for the first year would be reduced by the period preceding that. Here's a table of the rates that apply to the mid-quarter convention. Multiply the decimal values by the calculated depreciation for property acquired during each quarter:

Placed in Service	Decimal
1st quarter	0.875
2nd quarter	0.625
3rd quarter	0.375
4th quarter	0.125

The final system is the "mid-month convention." This is applied assuming property is acquired at the mid-point of a particular month. This system is mandatory for real estate depreciation and optional for most other classes. The applicable depreciation is multiplied by the decimal value as shown in the following table:

Placed in Service	Decimal
1st month	0.9583
2nd month	0.8750
3rd month	0.7917
4th month	0.7083
5th month	0.6250
6th month	0.5417
7th month	0.4583
8th month	0.3750
9th month	0.2917
10th month	0.2083
11th month	0.1250
12th month	0.0417

If these distinctions seem minor, remember the system is designed to provide guidelines for a wide range of circumstances. Some depreciable assets are worth millions of dollars, so a mid-month convention could translate into thousands of dollars in deductions in the current year.

The mid-month rules are more detailed for three classes of property requiring its use — 27-year, 31.5-year and 39-year properties. To see these detailed tables, and to check other rules about depreciation, get the IRS publication "Instructions for Form 4562."

This and any other IRS form or publication can be ordered online. The website address is: http://www.irs.ustreas.gov/prod/forms_pubs/index.html

Amortization

Note that in the footnotes suggested for Figure 13-1, improvements to the building are being amortized over five years rather than depreciated. Amortization spreads the cost of major expenses over time. The cost of improvements is listed at its gross value in the same way as are depreciable assets. A Reserve for Amortization account is maintained just like the Reserve for Depreciation (Accumulated Depreciation) account. This is one type of amortization. Another type reduces the value of an asset. Instead of showing gross values, monthly expenses for amortization reduce the balance. This is used for accounts like organizational expenses.

You can use different amortization treatments for different types of expenses. In the case of improvements, there is a lasting, tangible value — the improvements themselves. As long as those improvements exist, their total value should be shown. But there is no tangible asset for organizational expenses. This would include any expense not taken when incurred and which would normally have been expensed — except that the reason for the expense was related to the formation or reorganization of the operation.

For example, suppose you have to spend the following to organize your operation:

Legal fees (to incorporate or to write partnership contracts)	\$1,800
Accounting (to set up and advise on the formation of the business)	700
Rent and utilities for two months before moving in and beginning operations	1,380
Operating supplies (cleaning, etc.)	460
Total	\$4,340

These are legitimate business deductions, but they don't apply exclusively to current operations. Instead of writing them off to expense as they occur, the correct treatment is to classify them as an asset and amortize them over a period of time. At the end of that period, there will be no identifiable, tangible asset, so the balance of the account should reduce to zero.

For improvements, the gross asset is offset by a Reserve for Amortization account. But for organizational expenses, the asset is reduced each month. If

this \$4,340 asset were to be written off over a period of three years, the account would look like this:

Asset - Organizational Expenses

	Debit	Credit	Balance
Balance forward		\$4,340.00	
January		\$120.56	4,219.44
February		120.56	4,098.88
March		120.56	3,978.32
April		120.56	3,857.76
May		120.56	3,737.20

Because organizational expenses aren't fixed assets, they're included in the Other Assets category.

Lease or Buy?

The question of whether to buy equipment can be a major decision for any builder. It's sometimes to your advantage to lease equipment. You get the following benefits if you lease:

- Equipment needed for single jobs can be leased for that job only.
- An immediate tax deduction is available for the cost of monthly leases.
- No large investment or financing commitment is required.
- You have the chance to evaluate equipment performance before buying.

Leased equipment may be carried as an asset on financial statements if the offsetting liabilities are also included. This is the case only when:

- The lease includes a provision for purchase at a future date.
- The agreement provides that all or part of the payments can be applied to the purchase.
- The amount of the lease payments is higher than normal lease payments would be.

These points would normally be included in the terms of agreement on a lease-option purchase plan. This type of plan lets a builder lease equipment without a large cash investment. This may be a good plan if you intend to buy in the future. If you change your mind and decide to get out of the agreement, you lose only the higher payments you've made and the equity you've been building up in the equipment. Under a lease-purchase agreement, the full value of

the equipment is included as an asset and the full liability — less equity — is listed as payable, both currently and in the long term. Depreciation on the equipment can begin immediately as well.

The decision to lease or buy must depend on the equipment, its cost, the investment required, and the expected use. Will the use be regular or limited? What will the unit (hourly) cost be, and can you justify owning the equipment on that basis? Can you afford the investment itself?

Following is a comparison of the costs of leasing and buying equipment. Keep in mind that buying is cheaper for equipment that will receive regular use. All the costs of buying equipment are built into a monthly lease total. Except on a short term, leasing is *not* cheaper than owning:

	Lease	Buy
Monthly payment	xxx	
Depreciation		xxx
Maintenance		xxx
Insurance		xxx
Property tax		xxx
Interest on financing		xxx

Sales and Trade-Ins

When equipment is sold, the books have to be cleared of all entries relating to that asset. This includes taking out the gross value of the asset and the accumulated depreciation on it.

The other part of this entry is to book the gain or loss on the asset. These aren't operating gains or losses, and they have to be kept separate from regular sales and gross profits. Otherwise, your comparison of operating results will be distorted. Besides, gains or losses from sales of fixed assets receive different tax treatment from that of ordinary income.

If a piece of \$25,000 equipment, depreciated to \$7,000, is sold for \$4,000, the loss in the sale is \$3,000:

Original cost	\$25,000
Less: accumulated depreciation	- 18,000
Book value	7,000
Selling price	- 4,000
Loss on sale	\$3,000

The general ledger entry for this transaction would be:

	Debit	Credit
Cash	\$4,000	
Accumulated depreciation	18,000	
Loss on sale	3,000	
Fixed asset		\$25,000

A trade-in is recorded differently from a sale. For book and tax purposes, trade-ins aren't subjected to tax treatment until the replacement piece is sold or abandoned. The tax gain or loss is deferred by adjusting the basis of the new asset. In the previous example, assume that the \$25,000 fixed asset was traded in for a \$14,000 replacement:

Original cost, old asset	\$25,000
Less: accumulated depreciation	-18,000
Book value (trade-in)	7,000
Paid for new asset	14,000
Adjusted basis, new asset	\$21,000

The general ledger entry in this case would be:

	Debit	Credit
(New) fixed asset	\$21,000	
Accumulated depreciation	18,000	
(Old) fixed asset		\$25,000
Cash		14,000

This defers tax on the gain until the new equipment is sold.

Test Questions:

1. Depreciation, for the purposes of bookkeeping, is:

- A. The normal wear and tear on equipment.
- B. The periodic expense you claim to write off the value of capital assets.
- C. A book entry only and not a legitimate or allowable business expense.
- D. The cash paid on borrowed funds used to purchase a capital asset.

2. A “current” asset is one that:

- A. Is in the form of cash or is expected to be converted to cash within one year.
- B. An asset currently owned and not simply prepaid or held by deposit.
- C. Any asset directly related to a current liability, such as supplies for which you still owe money.
- D. An asset that is not obsolete.

3. The correct treatment for depreciation of land is:

- A. It must be depreciated on the same basis as any structures or improvements on it.
- B. Only the portion used for business can be depreciated.
- C. You can't claim any accelerated depreciation, but only straight line depreciation for land.
- D. Land can't be depreciated under any circumstances.

4. When listing long-term assets on a balance sheet:

- A. Show all gross values in detail, and then subtract accumulated depreciation in one number.
- B. Show three columns: gross value, depreciation, and net value.
- C. List only the summary totals for gross assets, accumulated depreciation, and net; and support these with a supplementary schedule.
- D. Any of the above methods is acceptable.

5. The Accumulated Depreciation account is:

- A. An expense account showing depreciation claimed year to date.
- B. A liability account showing the amount owed on financed asset purchases, which is gradually written off as loan payments are made.
- C. A negative asset account, showing the gradual reduction of an asset's value as it is written off over the years.
- D. A positive asset account, in which the gross value of the asset is gradually reduced until it is zero.

6. A summary of equipment costs by job is appropriate when:

- A. You want to bill a customer for the cost of acquiring major capital assets.
- B. Your equipment is used on specific jobs, and you can account for the hourly cost of operation.
- C. You want to avoid leasing equipment and having to pass on the cost to a customer.
- D. You need to cover the cost of equipment idle time.

7. Straight line depreciation is computed by:

- A. Dividing the value of the asset by the years in the recovery period, and claiming the same deduction every year.
- B. Depreciating the asset only to the extent that it is paid for; so if you finance the asset, you can claim a write-off only to the extent that you pay the bank.
- C. Taking the expense as a straight line-item write-off in the year purchased.
- D. Writing off the asset only over 35 years.

8. Declining balance depreciation is often appropriate in the construction industry because:

- A. It's valuable to write off as much as possible in the early years and then sell the asset for a book profit.
- B. The value of many types of construction equipment declines rapidly during the earlier years of its recovery period.
- C. It is a method that allows you to adjust the amount of depreciation each year, depending on your income.
- D. It is the easiest method to figure.

9. Amortization is an expense that:

- A. Is used to write off certain types of expenses in a method similar to depreciation.
- B. A technical word used by accountants that really means depreciation.
- C. Is used only for intangible assets.
- D. Applies only to the timber industry, and is rarely seen in the construction trade.

10. When you sell an asset:

- A. You remove the value from your books, as well as all accumulated depreciation.
- B. You have to pay taxes on the gain, including all of the depreciation you claimed during the time you owned it.
- C. The profit is separate from your operating profit or loss.
- D. All of the above.

11. You can make an election to:

- A. Depreciate all property using 200 percent declining balance.
- B. Depreciate all property using the straight-line method.
- C. Expense all assets acquired this year, without limit.
- D. Treat capital assets like general expenses.

12. The "expensing" provision allows you to:

- A. Write off qualified assets as expenses in the year they're placed into service.
- B. Depreciate land using the straight-line method.
- C. Increase reported expenses as a percentage of asset value.
- D. Deduct depreciation twice.

13. Expensing is limited in terms of:

- A. Dollar amount.
- B. Type of asset.
- C. Use of the asset.
- D. All of the above.

14. The mid-month convention is a calculation of:

- A. Taxes due by the mid-point of each month.
- B. Depreciation you claim from one month to the next.
- C. Depreciation claimed in the first year property is placed into service.
- D. Amortization allowed under current rules.

15. The decision to depreciate a class of assets using the straight-line method is:

- A. Irrevocable.
- B. Inadvisable.
- C. Illegal.
- D. None of the above.

Cash Budgeting

Budgeting for cash requires an understanding of future needs, a clear plan for acquiring fixed assets, building inventories, and collecting receivables, and a strong set of cash controls.

A good budget plans the use of resources required to conduct business. Within that broad area, the benefits of a good budget are many and varied. An organized and logical budget ensures that the balance between investment and expected yield is maintained at a realistic level. Cash flow problems are common to builders because the construction business requires large investments. It's a fast-changing business, and a cash budget that works is essential.

Builders must often make large investments in equipment and inventories, and they need short-term funding for construction in progress. Cash outlays for these investments can result in low profits, and the remedies aren't easy to identify without a good cash budget. A builder needs a plan for both immediate and long-term cash funding that takes into account both profits and investments in the business.

A complete cash budget doesn't simply budget a certain amount of cash for a specific future use, or simply allow for reserves in the handling of income. For example, setting up a payroll account and accumulating funds to pay payroll taxes is one type of cash plan. But this is a procedure, rather than a plan; a matter of habit after a while. A complete cash plan does much more. It allows for funds to be developed and used for business growth. It prevents errors in cash planning and direction by channeling cash to get the most for the sales dollar and more sales dollars from the cash flow. See Figure 14-1.

But a cash budget aims to do much more than this. Here's a list of what a good cash budget can accomplish.

- Make cash available for day-to-day and month-to-month operations
- Plan for the use of excess funds when they're available
- Time operations for seasonal business changes

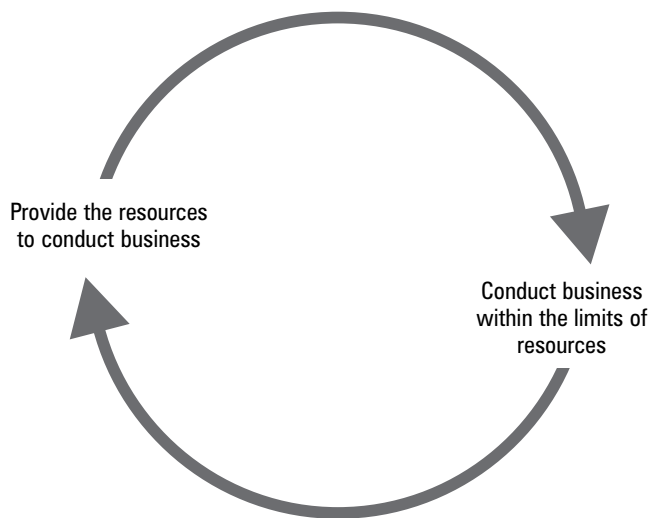


Figure 14-1
The cash plan

- Plan adequate levels of inventory in advance
- Serve as a model for the control of receivables and collections
- Budget loan payments
- Prepare for tax liabilities
- Take advantage of discount terms
- Help you improve and maintain a good credit rating and qualify for needed loans
- Control the purchase of materials and help prevent over- or under-buying.

No builder can afford to ignore the problems that result from poor management of cash assets. When lenders examine your financial statements, they look closely at your recent cash flow. If you're constantly struggling to maintain your cash position, lenders doubt that you can plan for loan repayments. They see the loan as a high risk, and are likely to turn it down.

Cash flow problems put growth markets out of reach. Almost any expansion requires capitalization. If you have serious cash flow problems at your current volume level, you lack the reserves to generate further cash flow with equipment, labor, or inventory investments. Your solution, of course, is to improve your current cash flow through budgeting. When you've built up your funds and improved your financial statements and credit rating, then you can think about expansion.

■ Testing the Cash Position

There are several ratios you can use to judge your cash position. They're called *liquidity tests*, and indicate the relative asset strength of a business. These tests are meaningless by themselves. You must look at them in the following ways to see the larger picture of your operation's cash position:

- In relation to each other. Each test measures cash position using different standards.
- As trends. The history of a business is as important as its current status, and is often more revealing.

The first test is called the *current ratio*. It compares current assets (cash, receivables, inventories) to current liabilities (current notes, accounts payable, and accrued taxes). *Current* means within one year. A business that has over-invested in fixed (long-term) assets may have liquidity problems. That is, it may not be able to meet current obligations from current resources. A business can be profitable and still be prevented from making greater profits if its assets are tied up and unavailable for current use.

Ideally, current assets should be higher than current liabilities. That is, the assets you have available to you currently should be able to pay off the liabilities that you currently owe and still leave you some funds. The current ratio is said to be *one to one* if assets and liabilities are about equal. If current assets are twice as large as current liabilities, the ratio is said to be *two to one*. The current ratio is said to be *one to two* if assets are half of liabilities. This means you can pay only half of what you currently owe with all of your current assets. Any time the current ratio is negative (current assets less than current liabilities), growth potential is negative as well.

When you prepare your financial statement for a lender before applying for a loan, you may be tempted to accumulate current assets for a couple of months to improve your cash position. But accumulating current assets always results in piling up current liabilities. Try instead to reduce your current liabilities rather than increase your current assets. Of course, when you reduce current liabilities you reduce current assets at the same time. But working on your liabilities first improves the current ratio. Assume that you accumulate your current assets for a couple of months; this allows your accounts payable to increase. Your total cash position looks like this at the end of two months:

Current assets	\$74,000
Current liabilities	\$52,000
Current ratio	1.4 to 1

Now you pay off \$30,000 of (probably overdue) accounts payable. This reduces your cash by \$30,000:

Current assets	\$44,000
Current liabilities	\$22,000
Current ratio	2 to 1

Paying off the current liabilities reduces both current assets and liabilities, but improves the current ratio. Now you have a solid current ratio to show the lender.

The current ratio is perhaps the most popular and widely-used test for cash position. It reveals how well you're able to maintain the cash flow of your operation, or how well you maintain money to fund the recurring bills in your business. A poorly managed operation continually defers payments because cash isn't available, ultimately destroying the ability of the business to work smoothly.

One variation of the current ratio is called "quick assets ratio," also known as the acid test, because it tests working capital the same way as the current ratio. It's a variation because it's computed the same, except that inventory is excluded. So the current assets are reduced by the value of inventory; then the modified current assets are compared to current liabilities. The value of the acid test is that by excluding inventory, it changes the test to make an exception for inventory and its effect on the cash position. An acceptance standard for the acid test is "1 to 1" or better, whereas the current ratio standard is 2 to 1 or better. The acid test recognizes that inventory can distort the test.

Why is it necessary to have a variation of the current asset test? There are several reasons. First, if you carry inventory, its cost-base level is likely to vary significantly from one season to another. In your slow season, it might fall to nearly zero; and in your busy season, it could be quite high. With that in mind, the current ratio is difficult to track through the year. At times, the cash position will look all right when, in fact, inventory and sales volume are both low. Other times the current ratio may appear poor, when the fact is that sales are high and you are heavily invested in inventory. The acid test is a more consistent test because inventory and its varying levels are excluded. This

occurs not only seasonally but also due to the nature of a particular business. A plumbing subcontractor specializing in residential repair work, for example, might be heavily invested in inventory and have a large balance in accounts receivable as well. In comparison, a commercial plumbing and heating sub might carry virtually no inventory, buying material on a per-job basis only. Which has a better handle on cash flow? With the current ratio, it's difficult to make comparisons between these operations, just as it's difficult between seasons. But using the acid test, the analysis makes more sense.

Another useful test shows your cash position over time. Take your gross profits as a percentage of sales for a given period. Then compute this percentage for a number of periods to get a trend. This indicates the amount of real control you have over your costs. When gross profit decreases in relation to sales, either you're not controlling your costs or your prices don't allow enough markup over your costs. Other factors that affect the level of gross profit can be unexpected inventory losses, increases in idle time, and material theft.

The ratio of *expenses to sales* is the third way to judge your control of your business. Sudden large rises in expenses affect your cash balances. Good cash budgeting is impossible if you don't keep expenses in line with sales.

A fourth ratio, *income to net worth*, shows the overall yield on your total investments. Compare present and past ratios to find the trend of your yields. If you actively seek out profitable work and favorable yields for your risk, the trend will be favorable. But the trend will show the opposite if you begin to take lower-yield work and lose control over costs and expenses.

The fifth cash position shows the amount of *debt to capitalization*. Total debt includes all liabilities; capitalization is the worth or value of the business. The value is the total of assets less liabilities. This ratio is a good test of capital strength, as it shows the level of debt commitment against the worth of the business. Compute this ratio for several periods and compare the ratios to get a trend. A decreasing trend indicates that you're running your business on more and more borrowed money. This is an unhealthy direction for any business to take. Interest on borrowed money consumes profits and decreases the overall yield on investment.

■ Preparing a Cash Budget

A cash budget must reflect business realities, since you use it to chart the future course of your operation. If you've never used a budget before, start by estimating your immediate future cash income. Figure out as closely as possible the amount of incoming cash for the next month. Once you know this, you can schedule your known expenses based on the availability of these funds. Most businesses have had to budget this way out of necessity at one time or another. But effective cash budgeting does more than allow you to pay your bills. It puts you on a controlled course of financial action designed to achieve long-range goals.

There are two principal ways to prepare a cash budget or forecast: the *cash movement* method and the *source and application of funds* method. Although there are other forecasting procedures, these two are commonly used because they're easy to prepare and at least as informative as any other method.

The Cash Movement Method

The cash movement method involves budgeting only the flow of actual cash in and out of your business. Don't list additions to accounts receivable, as no cash changes hands in charge sales. And don't include liabilities. But estimate payments on account over several months, taking the amount of your charge sales from your total income budget. Budget taxes and loan payments as they become payable.

This method is especially valuable for builders who have wide variations in their business volume from month to month. Such variations usually follow a predictable pattern. Building volume is affected by the seasons, zoning and political actions in your community, unusual weather conditions, the rate of community growth, and varying demands for the different types of work you do. Budgeting by the cash method lets you handle directly cash flow changes that occur because of monthly volume variations.

Figure 14-2 shows the form this budget should take. List each type of expected cash receipt and payment. This assures you that funds will be available to pay normal monthly expenses. Carry forward the amount at the end of the period on the last line to the beginning of the next period on the top line of the next column. Include in the cash budget the cost of any fixed assets you acquire, such as the \$10,900 under Capital Assets.

You can use this form for yearly cash budgets by making a column for each month. Be sure to compare your actual cash flow to the budgeted amounts both during and after the budget period. You can improve on your budgeting technique by comparing your forecast to your records of where the cash actually went.

The advantage of this method is its simplicity. Only cash flow is forecast; you need no estimate of depreciation or accruals for income and expenses. You include no tax liabilities or any other non-cash item. But the disadvantage of the cash movement budget is that it makes forecasting assumptions about cash items that vary greatly with non-cash factors. A good example is receipts on trade collections. Trade collection receipts depend on your maintaining a certain number of charge sales. Thus you need to analyze your charge sales carefully when you prepare your cash movement budget. Too often, cash budgets are drawn up without studying true sales expectations. The result is an inaccurate and nearly useless budget based on only partial cash flow estimates.

The Source and Application of Funds Method

The source and application of funds method is more precise than the cash movement method. It assumes that you will attain a certain level of net income. Then it adjusts for non-cash changes to arrive at the net increase or decrease in working capital. This form of budget doesn't show the actual ending cash balance, but instead budgets for the use of available funds. You maintain your cash balance within each period by timing your cash flow.

The form this budget takes on paper is similar to that of a standard financial statement that might be included in a package of company reports. Along with a balance sheet and an income statement, the source and application of funds statement makes a meaningful third main report.

Figure 14-3 is Johnson Construction's source and application of funds budget. The first line is the budgeted net income, Johnson derives this figure from two main sources:

- 1) The previous season's net income
- 2) The timing of its current jobs by stages of projected completion

He subtracts the costs and expenses from the gross income figure. To find out how much income it derives from its operation, Johnson Construction

Budget of Cash Movement
September, 20_____

	September 1-7	September 8-15	September 16-22	September 23-30
Cash at Beginning of Period	\$1,680	\$1,280	\$2,775	\$1,475
Receipts:				
Trade Collections	600	6,400	8,600	1,400
Retainages	—	—	2,000	—
Cash Sales	2,200	2,400	2,400	2,200
Other Receipts	—	—	—	—
Total Receipts	2,800	8,800	13,000	3,600
Total Cash Available	4,480	10,080	15,775	5,075
Payments:				
Materials	900	3,000	200	—
Labor	1,200	1,500	1,200	1,500
Subcontractors	—	—	1,000	—
Selling Expenses	400	400	800	600
Fixed Overhead	700	1,600	200	100
Notes and Interest	—	—	—	450
Payroll Taxes	—	805	—	—
Income Taxes	—	—	—	—
Capital Assets	—	—	10,900	—
Total Payments	3,200	7,305	14,300	2,650
Cash at End of Period	\$1,280	\$2,775	\$1,475	\$2,425

Figure 14-2
Budget of cash movement

adjusts all non-cash entries from net income. The principal entries in this case are depreciation, amortization, and the reserve for bad debts. These don't reflect cash changing hands, so they're added back. The result is the amount of working capital provided from operations.

Cash can come from loan proceeds as well as from jobs. November's increase of \$4,500.00 represents the long-term portion of a new note, that part which is payable beyond the current twelve months.

Fixed assets sold for cash are not reflected in net income from operations. Yet any sale of fixed assets increases the available cash of a business. Note the \$2,000 increase in November.

Any other increase of long-term assets also increases working capital in that period. The total of all such increases, plus the adjusted cash-basis income from operations, is the total cash available.

Cash used to pay costs and expenses has already been subtracted in the first line, Net Income. So the only costs and expenses Johnson lists in the Total Cash Used section are those other than from operations. These include the purchase of fixed assets. Note the \$7,500.00 entry for November. Cash can also be used to purchase or pay for other non-current assets.

Decreases in long-term debts (such as loan payments) are generally cash payments. This is a use of cash just like any other payment, and it indicates how heavily committed Johnson's available cash is to debt repayment. In Figure 14-3, a more careful plan would have spread out the net decrease in cash (on the bottom line) over all three months. We assume that Johnson has adequate cash reserves to cover the decreases in November and December. The principal causes of the large drain on Johnson's available cash are the purchase of a large fixed asset in November and the payments of long-term debts in all three

Budget, Source and Application of Funds
For the Fourth Quarter, 20_____

	October	November	December
Net Income	4,100.00	3,200.00	2,800.00
Plus: Expenses for Affecting Working Capital:			
Depreciation	160.00	160.00	195.00
Amortization	37.00	37.00	37.00
Provision for Bad Debts	105.00	105.00	105.00
Working Capital Provided from Operations	4,402.00	3,502.00	3,137.00
Increase in Long-Term Debts	—	4,500.00	—
Sale of Fixed Assets	—	2,000.00	—
Other Increases in Cash	—	—	—
Total Cash Provided	4,402.00	10,002.00	3,137.00
Purchase of Fixed Assets	—	7,500.00	—
Increase in Long-Term Assets	—	—	1,000.00
Decrease in Long-Term Debts	3,500.00	3,500.00	3,500.00
Other Decreases in Cash	550.00	550.00	550.00
Total Cash Used	4,050.00	11,550.00	5,050.00
Net Cash Increase (Decrease)	352.00	(1,548.00)	(1,913.00)

Figure 14-3
Source and application of funds budget

months. The long-term debt payments seem to take up all available cash after other payments have been made. This indicates that the business is relying heavily on borrowed money.

The source and application of funds budget details the changes in current assets and current liabilities. Changes in net income, long-term assets, and long-term liabilities will equal changes in net current assets and current liabilities. This is shown in Figure 14-4. Current assets and liabilities change over time. List the amount of change (increase or decrease) in current asset and liability accounts to see how your total cash flow will affect the availability and commitment of funds.

These changes to current asset and liability accounts are referred to as the *components* of cash flow. Income and the changes in *all other* asset and liability accounts reflect the *detail*, or the real source and application of funds. The changes in all other

asset and liability accounts show the same total change as that in current asset and liability accounts.

Plan thoroughly when you prepare a source and application of funds budget. Calculate billings and payments, material and labor needs, expenses, planned loans and interest. Include a blueprint for acquiring fixed assets. These backup schedules should support the cash flow conclusions in the budget.

Figuring a Break-Even Point

You reach a break-even point when your profits fall to zero. This can happen at any sales volume and with any cash flow. Know your break-even point at all times, and calculate it as part of your overall business plan. Coordinate your sales planning with your budgets and estimates for cash flow, overhead, and direct costs, relying on high and low expectations of your sales volume and your overall costs to come up with

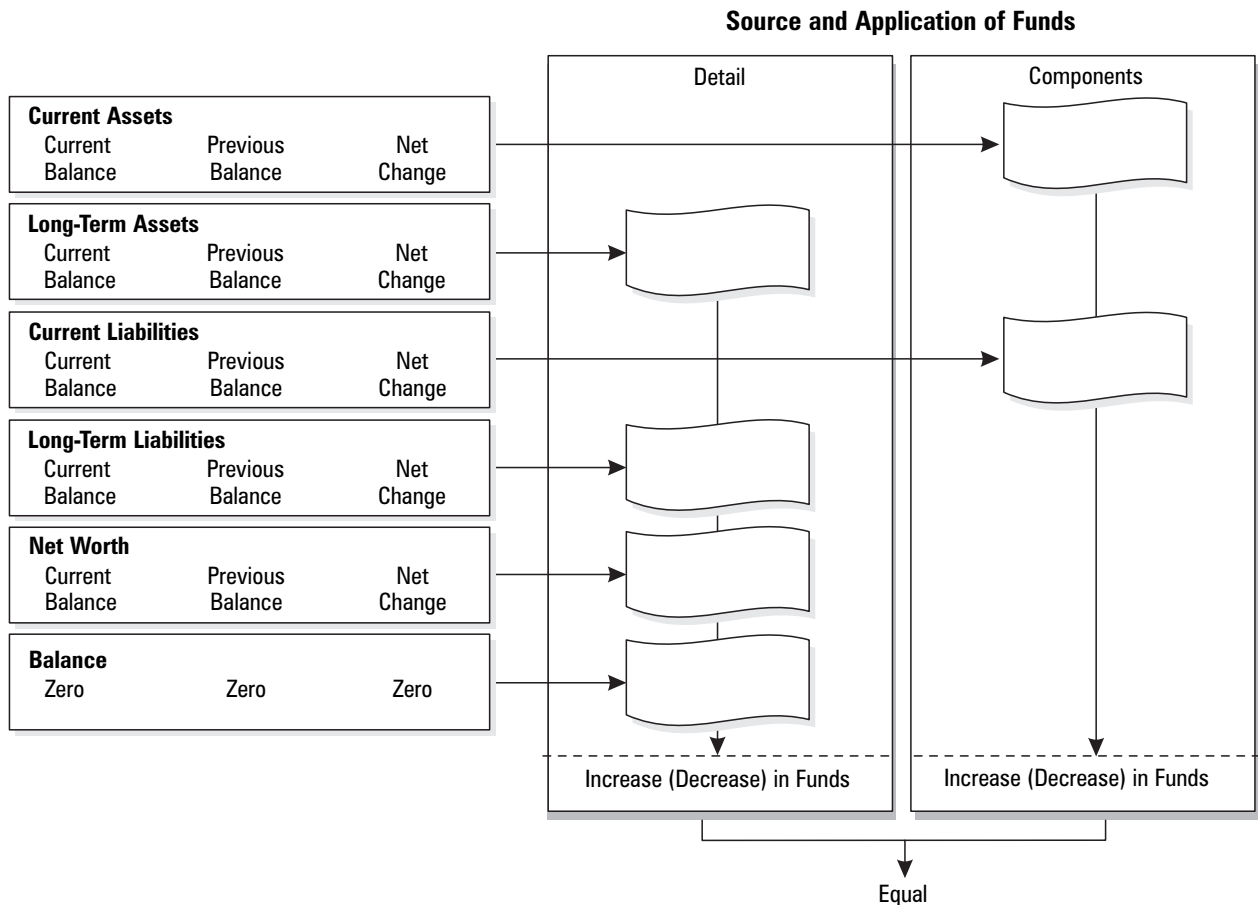


Figure 14-4
Changes in net current assets and liabilities

profit figures. When you calculate the sales volume you need to break even, you know that your cash budget must let you use your capital to produce sales of no less than that volume.

The break-even point has a very specific use. It doesn't distinguish between the various yields of the different jobs and job types you do. It can't help you decide what kinds of work you need to reach a volume goal. A break-even point doesn't encourage growth. It merely tells you the minimum sales you need to break even and serves as a reminder to maintain a strict cash budget to better that goal.

Compute your break-even point one of two ways.

- 1) You can build a budget from the bottom up. Calculate your fixed overhead, then your sales expenses, and finally your direct costs. This amount will equal the break-even volume of sales you need.

- 2) You can compute the break-even point without starting from the bottom. Assume different volumes of sales, then subtract the direct costs and selling expenses you need to maintain those volumes. Next take out fixed overhead, then from that figure establish a break-even point at each approximate volume by sliding the other figures up or down relative to it. Each approximate volume must equal direct costs, selling expenses, and overhead for you to reach a break-even point.

For example, on a volume of \$150,000 with a direct cost of 60 percent, selling expenses of 22.5 percent, and fixed overhead of \$28,000, you could project a loss of \$1,750. Thus the break-even point is slightly higher than \$150,000. On a volume of \$200,000, with projected direct costs of 60 percent, selling expenses of 25 percent and fixed overhead of \$28,000, your profit would be \$2,000. The break-even point would be something less than \$200,000.

As a rule, you project an increase in selling expense with higher volume. In this case, projected selling expense increased to 25 percent.

The value of all this is that a builder preparing his cash budget knows the minimum volume he needs to avoid a loss. This assumes that the levels of costs and expenses remain in line with previous experience. Volume is limited within reasonable bounds by your ability to invest in inventories, receivables and fixed assets. The result of this cash budget planning is a set of realistic goals. And a plan that starts from realistic goals for growth of volume, profits, and markets has a better chance to succeed. With a good plan, you buy new major assets with the knowledge that the purchases won't strain your assets. You won't over-borrow if you know the limits of your volume and available cash.

Cash Control

Cash control is closely related to the control of receivables, inventories, direct costs and expenses. Without those controls, a budget for cash flow will never work because the parts that make it up can't be accurately projected.

Besides the long-range plan, cash budgeting requires good day-to-day systems for recording cash — including control against theft. Cash controls are easy to maintain, even if there are several in effect. A cash forecast depends on the availability of receipts. Thefts of cash (either before it gets to the bank or by falsifying checks or tampering with the books) can have a very negative impact on even the best cash plan.

You need to control your cash as it flows through your office on its way to the bank. Cash is your most vulnerable asset in terms of potential loss. That's because it's easy to lose control of any group of balances when volume suddenly increases during seasonal fluctuations. Cash, unlike a company truck or piece of heavy equipment, can't be identified as yours. Anybody can use it.

The rest of this chapter shows how cash can get away from you, and how you can avoid this problem with proper office controls. Daily, weekly, and monthly summaries of cash income and expenses keep you informed of your cash status. Balance your bank accounts every month. Above all, be concerned about

your cash. A builder who closes his eyes to how his books and records are handled invites theft and loss.

While most employees are honest and trustworthy, there are those who can't resist temptation. Too many builders tempt their employees with lax cash control methods. Cash can be stolen in a number of ways. Figure 14-5 should give you ideas about how to prevent cash theft in your company.

But even the best, most foolproof theft prevention methods can't take the place of having trustworthy employees. A weakness in the cash control system often brings on theft; but a strong system can also challenge someone to beat it. All you can do is develop the best cash controls possible within the limits of your time, resources, and employees. But you can screen before you hire those to whom you entrust the handling of your cash. Check their references. Make sure their backgrounds and reputations are clean. You can also bond employees who handle large amounts of cash. In this case, the bonding company promises to reimburse you for any theft. This isn't practical unless you handle *very* large amounts of cash.

A series of related cash controls often discourage theft by simply not encouraging it. Well-designed cross-controls are usually more effective at this than sophisticated, tempting rituals for cash security.

Keep in touch with your cash flow and update yourself on the status of actual cash balances with a cash flow summary. A quick daily cash summary is one of the most practical and useful cash controls available. The value goes well beyond mere cash control. This report may be the only source of information on your daily cash balances, important information for timing payments and collections, receipt of discounts, and payment of payroll, notes, and taxes.

Figure 14-6 shows a daily cash summary. This summary should list all incoming and outgoing amounts. You can prepare this weekly or monthly, but a cash flow summary is most valuable when issued daily. You can see high and low balance days within the month, and this helps you time payments against collections. A monthly cash forecast and your records of actual monthly cash flow can't do this.

A series of daily cash summaries compared over several months can tell you on what days you can expect a strain on cash and on what days you can count on a comfortable level of available funds.

Problem	Solution
Lapping Cash is taken from the business by moving outstanding balances from one customer account to another. The thief can write off the amount of cash taken as a bad debt or he can adjust the amount as a reconciling item to an out-of-balance system.	The way to prevent lapping is to insist on monthly aging lists of all outstanding accounts. Compare this total to a reconciled accounts receivable total. Review all write-offs and adjustments personally.
Unofficial borrowing An employee can take cash for periodic “emergencies” and intend to pay back what he borrows some day. But the employee is often tempted to take more and more until it would be impossible to repay.	Prevent this by establishing office rules on petty cash and by establishing stringent controls on all funds. Carefully monitor your employees who have access to checking and savings accounts and cash awaiting deposit.
Failing to record cash sales Sales made for cash are only reported if the sale is recorded. An employee who receives the cash and who also records the sale has the opportunity to pocket the whole amount.	Discourage this by setting up an effective method of accepting cash. Use invoices for billings and orders, and fill out sales receipts for cash sales. File a copy of the invoice or receipt with the cash when you receive it. Keep and be able to justify all voided receipts and invoices.
Adjusting the checkbook An employee with access to the checkbook can change the cash balance to absorb checks he writes and does not record. The voided stub is assumed to be an unused check.	Prevent this by keeping the voided checks themselves. You encourage this form of theft if you allow the person who balances the bank account to also be responsible for the checkbook.
Falsifying or taking discount amounts Employees make purchases, get a receipt for the net amount and pocket the discount. Or, a bill is paid in full, then the vendor sends a refund for the discount, which the employee pockets.	Protect against this form of theft by knowing the discount terms of your suppliers. A monthly discount summary lets you verify the terms used by your employees against those quoted you by your suppliers.
Writing off accounts as bad debts and taking payments	Approve all write-offs yourself. Never delegate this job to others. Also prepare the bad debt analysis yourself for greater security.
Falsifying sales records or deposit slips	Keep your cash, deposits, and control records secure by limiting access to them. High-volume businesses use deposit controls involving several employees. Owners of small operations handle all the cash and deposits themselves. A secure method for mid-size builders is to count the cash yourself before turning it over to an employee to record and deposit. Then compare your total to a duplicate deposit slip. You retain control over your cash without spending a lot of time on the procedure.

Figure 14-5
Controls to prevent employee theft

Problem	Solution
Double use of petty cash receipts Employees take funds by reusing receipts from previous batches.	You may think you can control your petty cash by checking each set of petty cash receipts yourself. Go one step further and initial each receipt in ink in the same place on the receipt every time. You can tell at a glance if the space for your initial has been tampered with in order to run through a used receipt a second time.
Paying personal bills Some builders pay amounts on their books that are never checked or balanced.	Prevent this by balancing and checking all your accounts periodically.
False journal entries An employee can make a journal entry to increase the balance of the cash account by making an offsetting credit to an uncontrolled account. He can then write unrecorded checks on this overbalance or remove cash from deposits up to the amount of the overbalance.	Monitor cash journal entries and bank reconciliations carefully.
Overbalancing Many builders pay several bills with a single check. The employee staples these bills together with one or two of his own in the middle, and readies the check for your signature.	Look over such payments carefully to make sure that the bills you pay are all your own.
Submitting false invoices This is a rather elaborate scheme for petty theft. The employee establishes a false vendor to send invoices to the builder.	Prevent this by knowing what all checks pay for. Inspect all invoices carefully before signing checks, and be certain that you have approved all payments. Be sure there's an approved requisition or purchase order associated with each invoice.
Double payments This is another idea that requires elaborate planning and, often, a conspiracy between two people, one being the payee or their employee.	Know who you are paying, what you are paying for, and who you have paid already.
Changing check amounts after signature	This kind of theft is relatively easy to prevent. Use a check protector and be sure checks are imprinted before you sign them. Compare the written (or typed) amount to the imprinted amount and to the invoice amount.
Cashing unclaimed checks An employee may be tempted to take a check he knows has been unclaimed for several months.	Know how many checks are long-outstanding, and for what amounts. After a predetermined time (such as 90 or 180 days) stop payment on the checks and reissue them. If checks are returned to your office, know what happens to the money.
Forging checks	Keep close tabs on all checks to prevent the loss of blank or unnumbered checks. Check numbers are the most important check control you have. Keep a numerical log of all checks you sign. Include the numbers of all the voided checks you keep.
Forcing bank accounts Bank account reconciliations can be falsified to cover up the theft of funds recorded as deposits or not recorded as checks.	You can minimize the chance of bank account thefts by having the bank account balancing done by two different people.
Outright thefts You invite this kind of theft when you're careless with cash, books, and records.	Take at least minimum security precautions when you handle cash. Keep books and records secure when not in use. Show concern for all transactions in the office.

Figure 14-5 (continued)
Controls to prevent employee theft

Daily Cash Summary	
Date _____	
Balance Forward	_____
Add: Receipts	_____

Less: Payments	_____
Ending Balance	=====
Ending Balance by Location:	
General Account A	_____
General Account B	_____
Payroll Account	_____
Tax Account	_____
Petty Cash	_____
Cash on Hand or in Transit	_____
Total	=====
Prepared by: _____ Date _____	

Figure 14-6
Daily cash summary

Test Questions:

1. A primary purpose of cash budgeting is to:

- A. Provide information to lenders to convince them you need cash.
- B. Plan ahead so that cash you need in the future will be available when needed.
- C. Comply with income tax laws.
- D. Avoid having to give credit to customers.

2. Lenders are interested in “cash flow” because:

- A. It shows them how promptly your customers pay their bills.
- B. It demonstrates the degree of ability you have in managing your cash.
- C. It establishes whether or not your business is healthy enough to afford loan payments.
- D. All of the above.

3. The current ratio is a comparison between:

- A. Current and past-due liabilities.
- B. Current jobs under contract, and jobs under contract one year ago.
- C. Current versus long-term loan balances.
- D. Current assets and liabilities.

4. The ratio of debt to capitalization shows:

- A. Total debts compared to total net worth.
- B. Total borrowed funds from sources outside and inside the business.
- C. Total accounts payable compared to capital assets.
- D. Total notes payable on loans used to buy capital assets, compared to current net value of those assets.

5. The “sources and applications” of funds is a study of:

- A. Lenders who are willing to loan money to contractors.
- B. The sources of funds, such as income and sales of fixed assets; and the application of funds, like repayment of debts and purchase of fixed assets.
- C. Net profits, but strictly on a cash basis.
- D. The percentage of profits reinvested in the business, versus profits taken out for the owner’s personal use.

6. The “cash movement method” describes:

- A. Collection trends and your effectiveness in getting customers to pay on time.
- B. The profitability of investing in fixed assets, based on extra profits generated with the use of fixed assets on the job.
- C. Turnover of capital to produce cash profits, with higher turnover an indication of better management.
- D. Budgeting only the flow of cash in and out of your business.

7. In any analysis of cash flow, depreciation is:

- A. Always figured on the straight line method, unless tax laws allow accelerated depreciation.
- B. Allowed only on the same schedule as your loan payments, as the two factors are strictly related.
- C. Excluded as it is a non-cash expense.
- D. Treated as a reduction of net profits, because it is a legal expense for tax purposes.

8. Cash controls enable you to:

- A. Control collection trends.
- B. Prevent embezzlement.
- C. Plan and control future cash needs.
- D. All of the above.

9. Your break-even point is:

- A. The level of sales required to have no profit and no loss.
- B. The amount of cash you need to receive today to pay bills that must be paid.
- C. The budgeted overhead number that will be acceptable in order to meet your goals.
- D. The amount of a loan needed to pay off all of your outstanding bills.

10. The best way to discourage and prevent embezzlement is to:

- A. Ask all employees to submit to periodic lie detector tests.
- B. Install cash control procedures and enforce them strictly.
- C. Install hidden security cameras in employee work areas.
- D. Have FBI checks run on all employees who handle money.

11. The quick assets ratio is:

- A. So called because it can be done quickly.
- B. Also called the acid test.
- C. A method for valuing inventory.
- D. Arcane for purposes of analysis.

12. Cash budgeting in general is:

- A. A plan for the use of resources to pay bills as they arise.
- B. Of no value to the residential contractor.
- C. A function for your accountant.
- D. Required by the IRS.

13. Current cash flow control is important because:

- A. Your banker may have to loan you money if your current cash flow indicates you lack the necessary controls.
- B. It's needed for the balance sheet.
- C. It's used to divert a percentage of cash away from current obligations to cover long-term investments.
- D. You need to be in control in order to expand and to manage your current obligations.

14. Current assets are "current" in the sense that:

- A. They are more up-to-date than "non-current" assets.
- B. They are in the form of cash or will be converted to cash within one year.
- C. They are funds now due and payable.
- D. They are assets that you purchased within the last year.

15. The ratio of expenses to sales:

- A. Is an indication of market forces in your area.
- B. Helps identify job-related cost overruns.
- C. Helps you track expense levels to keep them in line with your budget.
- D. Indicates which lines of business provide the best cash flow.

Cost and Expense Records

An efficient and practical cost system is a high priority requirement for every builder. Too often, cost recording systems are nonexistent or inadequate in small- and moderately-sized building operations. Many builders assume that a cost system is too complicated for day-to-day maintenance and effective application. In fact, a practical, streamlined cost system provides a wealth of information that is available from no other source.

Because you're usually involved in several different jobs, you need a flexible, efficient and detailed cost procedure. Keeping records by job can be efficient and precise — or it can be time-consuming, uninformative, and a complete waste of effort. The key to good cost recording is a streamlined daily reporting system that collects maximum information with minimum effort. You can do this without getting bogged down in an overly complicated file of forms, lists, and calculations.

Cost accounting for construction work doesn't require specialized training. You know what information you need and should be able to produce your own reports in a short time. And knowing how the information was produced makes using that information to control costs and expenses much easier.

Good cost records make it easier to control costs on jobs in progress, find out where costs have exceeded estimates, and estimate future jobs based on your known costs.

Each job in a builder's operation can be thought of as a cost center. The cost centers are the areas of the business that produce profits. The activities in your office *aren't* cost centers. Neither are your overhead expenses. You allocate these costs to the cost centers to record total costs. That means you've got to allocate these non-profit-producing (office and overhead) expenses to each job. When this is done reasonably and consistently, each job you have carries a fair amount of non-profit-producing expenses. All costs and expenses of doing business are either direct costs or assigned to a cost center. When you do this, your operation is working within a cost center format that makes estimating and cost analysis both easier and more realistic.

■ Objectives of the Cost System

Finding the best way to keep track of job costs and expenses isn't easy. Every builder's operation is unique and the right system is different for everyone. But knowing the objectives of a cost system should help you design procedures that will work well for you. A cost system should do the following:

- *Provide control of job costs.* Keeping within a job schedule requires that you monitor the completion of work and control the use of material and labor. Otherwise, spending isn't under control. An easily-prepared report can tell you what your actual costs and expenses are by job. Then you compare this report to the schedule commitments.
- *Serve as a guide to future estimates.* Many builders don't use past cost records when preparing estimates. That's a mistake. Your cost records are as valuable as your own knowledge of current labor and material costs. An organized cost system is your best reference for avoiding past estimating mistakes. Good cost records make it possible to estimate the scheduling and amount of your costs. They make it less likely that you'll underestimate or overlook major parts of the cost of completing a project.
- *Allow for varying labor rates.* Labor costs are the key to profitability on most jobs. A small percentage error can turn a healthy profit into a loss in a short time. Your cost accounting system should help you stay within the time and cost estimates established in the original budget.
- *Control material purchases and the level of surplus inventory.* Your cost system should help you control the timing of material use. You have a large investment in materials on most jobs. Material use should be checked by job on a regular basis. Many material cost increases are the result of extra work not originally contracted for — work you should be paid extra for if you note the extra cost in time and discuss it with the owner promptly.
- *Judge the quality of job force productivity.* Labor productivity can be evaluated from the time required to complete each phase of a job. It's often difficult to motivate people to achieve company goals because the outlook of employees is never the same as that of the owners and managers. The only way to control productivity is through a regular check of labor efficiency.
- *Analyze control problems unique to each job.* Even though every project is special and no two are identical, a cost control system can work for every builder. Many contractors believe that their costs in a modest operation can't be controlled because every project is different. An effective system will help you identify and control the differences between jobs.
- *Identify overruns promptly so corrective action is possible.* A procedure that tells you that you had cost overruns last month, or even last week, is of little value. But one that flags problems as they arise can be a real money-saver, justifying the investment of time and effort required. You should be willing to make cost control one of your primary functions. Managing the day-to-day costs of your projects gives you:
 - 1) direct involvement in your projects
 - 2) a means for controlling costs
 - 3) a growing familiarity with present and future cost requirements of your jobs

An efficient cost system is based on summary reports that are simple to maintain yet highly informative. Design your reports to conform to the book-keeping system you use. This will help you avoid duplication of effort. The information has to be timely. It must be analyzed promptly, before expenses get away from the schedule established for the job.

Figure 15-1 shows the form used each month by Johnson Construction Company to record costs for five jobs during the month. These costs are recorded as deferred debits. Detail job costs and expenses come from the job cost card, which is explained in detail in Chapter 16. The worksheet shown in Figure 15-1 is used to summarize the current month's total costs and expenses by job, and to provide support for the balance sheet account that accumulates deferrals.

General expenses which don't apply directly to jobs are allocated among the jobs in progress. And a fast method for applying deferral totals to a large number of general expense accounts is explained in Chapter 16.

■ Scheduling Costs and Expenses

Your estimate is your budget for scheduling costs and expenses over the life of each job. The construction budget and schedule of costs are your guide to controlling job costs.

Worksheet, Cost and Expense Deferrals						
for the Month of _____, 20__						
Description	Total	Job	Job	Job	Job	Job
Percentage of Completion						
Materials						
Direct Labor						
Subcontractors						
General Expense (allocated)						
Total						
Completed Contract						
Materials						
Direct Labor						
Subcontractors						
General Expense (allocated)						
Total						

Figure 15-1
Worksheet for cost and expense deferrals by job

Figure 15-2 shows headings for five forms that help you record and document costs and expenses on a job. Break the job into phases, defining each part carefully for your reference. If you have a clear division for each phase of the job, you should have no trouble dividing your costs into distinct phases.

The form Total Costs and Expenses in Figure 15-2 includes a column for a revised estimate. This estimate should be revised on a regular basis to keep your deferrals current. Otherwise, the amount of deferral will be off by the cost or expense variance. If deferrals are off, your financial statement is inaccurate. Revising the estimate will help you forecast eventual profits and losses.

Performance Standards

One of your most difficult but also most rewarding tasks is to interpret the information this cost system provides. For example, if it looks like labor will cost more than estimated, can you determine where the higher costs are originating and what should be done to bring costs into line? The degree of control you have is measured by your ability to act on useful information. Control means changing the course of events from what would normally occur to what you

Materials			
Week Ending	Estimate	Actual	Variance

Subcontractors			
Week Ending	Estimate	Actual	Variance

Direct Labor			
Week Ending	Estimate	Actual	Variance

Allocated Overhead			
Week Ending	Estimate	Actual	Variance

Total Costs and Expenses				
Week Ending	Estimate Total	Actual Total	Variance Total	Revised Estimate

Figure 15-2
Five forms for scheduling costs and expenses

Labor Performance Standards**Job Description** Downs Housing **Job Number** 214**Phase of Project** Interior completion (Specs. section 9)

Week Ending:	Type of Work	Labor Hours		Ratio
		Actual	Standard	
4-15	Masonry	14	12	1.2 / 1
4-15	Carpentry	63	60	1.1 / 1
4-15	Painting	6	4	1.5 / 1
4-15	Sheetrock	3	3	1.0 / 1
4-15	Clean Up	7	9	0.8 / 1
4-15	Finishing	3	6	0.5 / 1
4-22	Masonry	11	12	0.9 / 1
4-22	Carpentry	71	60	1.2 / 1
4-22	Painting	5	4	1.3 / 1
4-22	Sheetrock	4	3	1.3 / 1
4-22	Clean Up	8	9	0.9 / 1
4-22	Finishing	6	6	1.0 / 1
4-29	Masonry	10	12	0.8 / 1
4-29	Carpentry	68	60	1.1 / 1
4-29	Painting	4	4	1.0 / 1
4-29	Sheetrock	4	3	1.3 / 1
4-29	Clean Up	9	9	1.0 / 1
4-29	Finishing	7	6	1.2 / 1

Figure 15-3
Labor performance standards

want to occur. Your system is a tool only if you use it to exercise control.

Setting performance standards is one way to control costs. Assume you believe that the cost of labor on one job is likely to be higher than expected. To reverse that trend, you could establish a performance standard for the completion of each part of the project. A performance standard for direct labor is measured in hours.

Figure 15-3 is a ratio analysis of direct labor. It compares actual time to a standard or estimated time. The standard for each phase of each project is the amount of time in which a particular task should normally be completed. A comparison, such as that done in Figure 15-3, will help you locate problem areas. Then you can take steps to correct the problem. It may be that you have a less-experienced crew doing fairly difficult work. Perhaps your crew size is too large or

your crew leaders aren't organizing the work well. Whatever the cause, the cost-conscious builder will try to bring the costs back into the range of the standard.

Control of Deferred Costs

Income deferral accounts were discussed in Chapter 2. Under percentage-of-completion and completed-contract accounting systems, income is deferred until the time comes to recognize it. Your records of costs and expenses are largely lists of deferred debits.

Percentage-of-completion billings are partially deferred to the extent that billings exceed earned income. For example, a 50 percent billing on a job only 40 percent complete would require a deferral of

10 percent. Under the completed-contract method, all income is deferred until completion of the job.

The same rules apply for cost recording on your projects. Only the costs and expenses to be recognized are shown on a statement of income. All others are deferred.

It should be easy to find the amount to defer. The contract price and the partial billings to date are exact amounts. But with costs and expenses, the amount to be realized and the amount to be deferred depends on the accuracy of the original estimate and your estimate of the work completed. For that reason, your cost recording system must be able to handle the deferral of costs and expenses.

In a well-controlled procedure, you can relate costs and expenses to income to see that the work is progressing as assumed in the estimate. If you can stay within your estimate, deferrals of costs and expenses can be based on your estimated totals. However, when there are variations from the estimated totals, you have to adjust the total to find the deferred amount.

You find the amount to be deferred by comparing actual costs and expenses to estimated totals each month. When variances show up, revise the original estimate to forecast a new actual cost and expense total. You may find that totals for some jobs are constantly revised as the job progresses. Following costs like this keeps you on top of the progress on your jobs and the profit you expect. It also lays the foundation for better estimating in the future.

Deferred income is neither a current nor a long-term liability. It's a *deferred credit*, a third, distinct classification on the operation's balance sheet. Like income, costs and expenses are neither current nor long-term. They form a separate balance sheet classification found in few areas other than the construction industry. This classification is called *deferred debits*.

Many builders include these deferrals as current assets. In practice, however, they're not available in the current period like other current assets, such as cash, accounts receivable, and inventories. Deferrals aren't liquid assets and shouldn't be considered or classified as such. To do so only distorts the current ratio (current assets to current liabilities) and presents an unfair picture of the operation's status.

Considerable detail is needed to back up the totals in the general ledger accounts for deferred debits. This requires a set of detail records maintained off the general ledger. The general ledger isn't the place to include analyses of accounts, only summaries.

Figure 15-4 is a form for calculating and collecting entries to deferred debit accounts. There are two principal deferred sections in the general ledger, each with four sub-accounts:

Deferred Costs and Expenses:

Percentage-of-completion method

Materials
Direct Labor
Subcontractors
General Expenses (allocated)

Completed-contract method

Materials
Direct Labor
Subcontractors
General Expenses (allocated)

The general ledger entry, which would be made in a special journal and supported by these schedules, would be:

	Debit	Credit
Deferred Costs and Expenses (in detail as above)	xxx	
Materials		xxx
Direct Labor		xxx
Subcontractors		xxx
General Expenses		xxx

The entry to General Expenses can be made to a summary control account in the expense section of the ledger, or to each detail account, as explained in Chapter 16.

Since entries going into deferral accounts will eventually be reversed, the journal to take out deferrals would be the opposite of the example above. In most cases, the monthly summary total of reversals won't be the same as the previous month's recorded amount. For that reason, maintain good detailed records so you know the status of each job's deferred costs and expenses at any time.

A second way to support your deferred debits totals is to reverse the previous month's entries every month, and calculate the current deferral each time the entry is prepared. The advantage of this method is that any errors which have been recorded previously are eliminated each time the deferral is recalculated. None are carried forward. Under this method, all deferrals from the previous month are reversed. Then a worksheet is prepared to calculate deferred debits as of the end of the month. This is a much simpler way to support general ledger totals. See Figure 15-4. The

Worksheet, Cost and Expense Deferred Debits

As of _____, 20____

Description	Job Number		Job Number		Job Number	
	Spent to date	Deferral	Spent to date	Deferral	Spent to date	Deferral
Percentage of completion						
Materials:						
Spent to date						
Deferral						
Direct Labor:						
Spent to date						
Deferral						
Subcontractors:						
Spent to date						
Deferral						
General Expenses:						
Allocated to date						
Deferral						
Total Spent to date						
Total Deferrals						

Figure 15-4*Worksheet for deferred debits*

balance in the accounts at any time is new — it has been calculated this month.

Notice that Figure 15-4 covers only percentage-of-completion contracts. No special worksheet is necessary for projects kept under the completed-contract method. The balance in the deferral account would always be equal to the total on the job cost cards. This is because neither expenses nor costs are recognized until completion.

It's obvious that bookkeeping under the completed-contract method is much simpler because less calculating is required. It takes less time and you maintain more control.

A third method of handling deferred costs and expenses for percentage-of-completion jobs is to post all costs into the deferral account and remove an esti-

mated percentage each month. The percentage to be removed is equal to the estimated percentage of completion, excluding costs which exceed the budget for any category. Because costs and expenses can vary from the original estimate, this third method isn't always as accurate as it might seem.

Problems of Cost Allocation

The trick to cost accounting is achieving accuracy, and being able to provide yourself with information that's both revealing and useful. You need to effectively control job costs, which means monitoring costs to avoid overruns and ensure a profit within the forecast and schedule for each job.

And that's no easy task. A slight schedule delay or cost surprise can make a large part of your profit disappear. Control is essential. There are two major problems that occur in many cost systems. First, the system becomes overly complex and takes too much time. And second, in an effort to make it comprehensive, the cost system becomes too broad and ends up revealing no real information. This happens when people try to allocate items that simply can't be allocated.

Direct costs should be carefully monitored and assigned to the proper job, and regularly compared with the estimate that served as the basis for your original cost summary. Only by following and comparing carefully can you expect to really control costs and identify trouble areas before they become disasters.

To some degree, there are general expenses you can assign to jobs accurately. However, the more you attempt to allocate overhead expenses, the more trouble you create for yourself, because your entire cost analysis system will become less reliable. Specific expenses in certain situations might contribute to a

particular job's cost. For example, a long-distance job might account for exceptionally high auto, truck and telephone expenses.

Remember, your general expenses exist at a certain level whether you work a particular job or not. So it makes absolutely no sense to try and allocate *everything* to your profit and loss by job. You do need to assign an overhead expense to each job, but it's usually a predetermined percentage or some other similar set amount. And that's the key: You base that amount on an average figured from your past year's expenses. As a general rule, overhead tends to run at predictable percentages of above-the-line results (sales, direct costs and gross profit). Because the volume of overhead is most likely to be reflected in a corresponding change in direct labor, it makes sense to assign overhead to each job on the allocation of direct labor costs. That's most easily done on the basis of hours rather than on dollar amounts. Thus, as activity picks up on one job and falls off on another, the degree of overhead assigned to each job will reflect the change in a logical way. If you consider that overhead is not attributed directly by job, this method makes more sense than any alternatives.

Test Questions:

1. Cost accounting controls:

- A. Tend to belong in the expertise of trained cost accountants.
- B. Are normally found as part of specialized accounting software.
- C. Can be exercised without special training or background.
- D. Are actually separate from job cost controls.

2. A good cost system should include information allowing you to:

- A. Exercise a degree of control over direct costs, which are exclusive of overhead.
- B. Monitor inventory levels as they change and control the volume of purchases.
- C. Control and monitor the effectiveness of crews on the job to ensure that labor excesses don't erode profits.
- D. All of the above.

3. When you run into job overruns:

- A. They translate into unavoidable losses on that particular job and need to be made up elsewhere.
- B. They result in losses that must be passed on to the client.
- C. You need to take immediate action to limit or reverse the problem to prevent further erosion of your profits.
- D. They are probably caused by competitive factors.

4. Job cost analysis:

- A. Is helpful only if reports are received in a timely manner.
- B. Is valuable information at times, but difficult to get instantly because of the paperwork involved.
- C. Requires computerization to produce efficiently.
- D. Is essential for the preparation of accurate financial statements.

5. Scheduling is important because:

- A. Accelerating your time schedule enables you to improve overall profits.
- B. Control helps you to manage direct labor, and without control you have no way of knowing how much time your crews spend on the job.
- C. Subcontractors schedule their time too, and their time is not as flexible as yours.
- D. You can only make time for management and review functions when your jobs are progressing as planned.

6. Performance standards allow you to:

- A. Approach lenders with professional financial statements, leading to more avenues of capitalization.
- B. Make judgments about results based on your goals.
- C. Monitor employee performance so that evaluations can be fair and reliable.
- D. Bring jobs in at or under budget.

7. Control of costs under the percentage-of-completion method:

- A. Presents special challenges since those costs aren't recognized except in the degree to which the job is completed.
- B. Is a function done outside of the general ledger.
- C. Is easier when thorough procedures and efficient forms are part of your routine.
- D. All of the above.

8. Deferred costs are those costs that:

- A. Are not incurred because you shop for discounts and better prices.
- B. Come in under budget.
- C. Are not recognized because they are in excess of the percentage of job completion.
- D. Are booked in advance of the percentage of completion on the job, even though they shouldn't be.

9. Deferred income is:

- A. Income received in advance of the time it is earned.
- B. Income included in your plan, but not yet paid by the customer.
- C. Income counted in your forecast for the purpose of your financial statement, but not likely to be received until next year.
- D. A discount received on volume purchases of material, but not booked until the following month.

10. Deferred costs and expenses are booked with a journal entry including:

- A. A debit to each cost and expense account, and a credit to the deferred cost liability account.
- B. A debit to the deferred cost asset account, and credits to each cost and expense account.
- C. Debits or credits to various cost and expense accounts, depending on the timing of the entry.
- D. A debit to income and a credit to the liability account.

11. The allocation of general expenses by job:

- A. Is done on a percentage basis.
- B. Is done based on percentage-of-completion.
- C. Requires exact analysis by expense category.
- D. Has no real value to your job cost analysis.

12. Job cost analysis should occur at:

- A. Sales level.
- B. Gross profit level.
- C. Operating profit level.
- D. After-tax profit level.

13. The problem of trying to allocate expenses to jobs is that:

- A. It makes the analysis inaccurate.
- B. It takes too much time.
- C. Allocations are complex.
- D. Allocations require too much information.

14. A job cost system should be:

- A. Designed according to the limitations or potential of your software program.
- B. Dictated by your accountant based on current reporting standards.
- C. Programmed to ensure allocation of expenses so that no job will be unprofitable.
- D. Made to work efficiently so that the job of tracking will be easier.

15. Good job cost records can help you to:

- A. Do your tax planning better.
- B. Prepare future estimates with greater accuracy.
- C. Save bookkeeping time by skipping some entries.
- D. Do less planning.

Accounting for Costs and Expenses

Your cost accounting system doesn't have to be complicated. An efficient system can still be simple and easy to maintain. The sooner information is available, the more useful it is. And information is available quickly if your procedure is simple and as automatic as possible. This chapter shows you how to use your books and records to allocate costs and expenses to jobs. A system that doesn't permit prompt analysis won't be worth the trouble it takes to maintain. But one that reveals vital information about a job's profits and losses, cash flow, and use of material and labor will save you money.

Analyzing labor productivity is essential to controlling costs and making accurate estimates. It helps you spot lost time and make required corrections while the job is still in progress.

Controlling labor cost is probably your most challenging control problem. There are two areas of labor control to consider: your office, sales and supervisory force, and your construction crews.

Idle time increases labor cost and reduces profits by the same amount. If you have to include idle time in your estimates, you become less competitive. Controlling labor cost should be among the top priorities of every cost-conscious builder. Your bookkeeping records can tell you as much about productivity on your jobs as a professional labor cost analyst can — and at a much lower cost.

The only way to analyze labor hours is by the job. A total picture is important in its own way, of course. But only detailed analysis of each part of every job will help you understand your true labor requirements.

Your first step is to design a good way to collect costs on your jobs and assign those costs to specific projects. Once you know what your true costs are, you can compute and compare gross profits, selling profits (the amount of profit before fixed overhead), and net profits.

While you can identify direct labor costs by job, that's not true of office, selling, and overhead expenses. You need to find some reasonable way to assign these expenses to each of your jobs. Your assignment method won't be perfect, no matter how logical it is. There's no foolproof way to make absolutely sure each job carries its fair share of overhead. You can only be as consistent as possible, realizing that the best estimate of true costs and expenses is better than no cost system at all.

The usual method is to assign a percentage of fixed overhead expenses to each job. For the purpose of analysis, there isn't much value in trying to study fixed overhead in connection with sales and costs. There simply isn't a connection. So while you might assign an overhead factor as part of your billing to a customer, the analytical part has to be confined to direct costs as they relate to sales.

We'll discuss specific ways to apply overhead expenses to your jobs in a reasonable and efficient way later in this chapter. But first, let's look at the procedure for accounting for your direct labor.

In the following examples, we'll use a pegboard system. Although pegboard is less common today than the more efficient automated systems, these examples make the procedures convenient and visual. So, even if you don't use a pegboard, this will assist you in understanding how the basic procedures work in any system, including an automated system.

Accounting for Direct Labor

The goal of labor cost analysis is to find the actual cost to complete each part of every project. Most jobs with high labor costs have inefficient work schedules that result in excessive idle time. Jobs run with a large crew and only one foreman cost more to complete. Invariably several workers will be idle for a substantial part of the time. Jobs that use only a few workers and one foreman usually have a higher productivity rate, especially if the crew includes a highly skilled worker, one lower-wage apprentice and one laborer. Small crews with a good mix of skill and pay levels are usually most productive.

The payroll register is the best place to do a weekly labor cost analysis. Post and analyze labor costs as soon as you complete the week's payroll. That way you have the cost information available right away.

Let's assume you'll write and record payroll checks on the left side of a pegboard check register. The register shows the date, name, hourly rate, total hours, gross pay, deductions, and net pay. The right side of the register is available for cost analysis. Remember that we're using the pegboard only as an example. It's more likely that you'll be keying entries into an automated accounting system. The pegboard just helps you see what's involved in the analysis.

Use Your Time Card

Your first step is to break down the hours by job, or by tasks within jobs, depending on the detail you need. This isn't difficult if you have a properly-designed time card.

Include a task breakdown by job on the time card for each worker. Each crew member, under supervision of the supervisor or crew leader, notes the time spent on each major task. The time can be rounded to the nearest half hour, but every hour of the work day should be accounted for and noted on the card at the end of each day. Once your workers are accustomed to this procedure, it should take only a minute or two to record each day's work.

The next step is for someone in your office to convert the hourly breakdown to labor cost dollars. Convert each worker's hours individually, because varying wage rates result in varying costs.

Figure 16-1 shows the right-hand side of the payroll register. Here, the gross wages are broken down by task or job number. The employee on the first line, for example, has divided his hours for the week between three jobs. Number 437-P shows 24 hours of work and a payroll total of \$252.00. Include only your payroll cost, not your tax, insurance and overhead costs. You'll add those later. The column for task number 437-P might be used to collect all costs for framing a roof on a particular job. The column numbered 432-R might cover other rough carpentry on the same job or a different job. With a little ingenuity you can create job and task categories that correspond to the type of work you do.

Make the list of accounting categories available to your crews so they can record their time properly. Post the list where the crews check out at the end of each day. That way they can record their hours by code number rather than by description. But be sure to have a supervisor review the time cards for accuracy. This saves time both for the workers and for the bookkeeper who posts your analysis worksheet.

PA OLL EG					A a s s Pr jec							
E p ee	H urs	a e	Gr ss		432-		437-P		445-		471-O	
Jones	40	10.50	\$420.00				24	252.00	8	84.00	8	84.00
Michaels	40	9.80	392.00		16	156.80	24	235.20				
Peterson	40	9.80	392.00						40	392.00		
Rogers	35	9.80	343.00		8	78.40					27	264.60
Stevens	40	10.50	420.00						16	168.00	24	252.00
Thomas	40	7.75	310.00		40	310.00			24	186.00		
Vargas	24	7.75	186.00									
Weston	45	9.80	441.00		40	392.00					5	49.00
Curry	40	9.80	392.00								40	392.00
Malloy	32	8.00	256.00				32	256.00				
Rubio	40	7.75	310.00		6	46.50	10	77.50			24	186.00
	416				110		90		88		128	
			3,862.00			983.70		820.70		830.00		1,227.60
						\$8.94 per hour		\$9.12 per hour		\$9.43 per hour		\$9.59 per hour

Figure 16-1

Analysis of payroll costs by job

It's easier to record and post direct labor hours if you're consistent in your task number assignments. For example, in Figure 16-1 the column 437-P might be task 437 on a job that has been assigned the letter P. Task 437 is always roof framing regardless of the job number. All labor and material costs on job "P" would be posted to an account with the P. If you have more than 26 jobs under way during a year or if your crews do more than 999 categories of work, use a longer combination of numbers and letters.

You'll need some numbered categories to record idle time, driving time, cleanup and maintenance time and other time that can't be charged to a particular job. Allocate these hours among your jobs with other overhead expenses. Be sure your numbering system is well defined so your workers have no doubt about what number to use to record their hours.

Use the same numbering system for material costs as you do for labor hours. In Figure 16-1, labor cost for roof framing is recorded under Job #437-P.

Use the same number to post the materials for that same task and job on a separate material cost worksheet.

Naturally, some of the lumber ordered for roof framing may be used somewhere else in the job, but your estimate of the materials required will probably be fairly close to the actual amount used. If the job requires more lumber than you estimated, find out where the loss occurred or where your estimate was wrong. Then assign the additional cost to the appropriate category.

If you have more than a few jobs under way at a time and more than 10 or 15 work categories, your payroll register probably won't have enough columns to record all your crew hours. Instead, use any standard ruled pad with vertical columns. Keep the completed sheets in a loose-leaf binder. They become important cost records that you'll use many times when estimating new jobs.

At the end of a year you'll have a record of several hundred worker-hours under a number of categories. A quick tally of the number of square feet of roof framing this represents will tell you the average hours required for every 1,000 square feet of roof your crews framed. Or here's a way that's even better and easier: Divide the roof framing hours by the board feet of lumber you used for roof framing. That gives you the average worker-hours required per 1,000 board feet of lumber. Of course, some jobs take more time per 1,000 board feet and others take less. There are many factors that affect productivity. But you should be able to tell in advance which jobs will be harder or easier than your average and approximately how much harder or easier they will be.

Note in Figure 16-1 that 46 of the 110 job hours for job 432-R were worked by employees earning \$7.75 per hour. The balance, 64 hours, were at a rate of \$9.80 per hour. Other projects had a mix of hourly rates ranging up to \$10.50 per hour. Keep this average hourly cost in mind when comparing different jobs.

The average hourly cost in Figure 16-1 ranges from \$8.94 per hour to \$9.59 per hour. Obviously, the demands of different projects aren't the same. This is an important consideration when you compile estimates. Some projects require the constant presence of a supervisor while others may not. Some projects require a higher ratio of skilled workers. You may sub out most of your specialized work, but even so your cost per labor hour will vary widely between jobs.

While the special needs of each job will vary, you should determine whether the average hourly labor cost is reasonable on each of your jobs. If a rate varies considerably from week to week or remains at a high level, you need to investigate. It could indicate that there's too much supervision or too many highly-paid workers on the job.

The direct labor analysis shown in Figure 16-1 is practical because it provides valuable information with a minimum amount of work. The information is available right away in a format that's easy to understand. You can see the components of the average hourly rate in detail, but each employee's time for the week is listed on one line. This kind of analysis establishes clear trends for each job. Most important, it provides invaluable information for use in future estimates.

■ Accounting for Materials and Subcontracts

Since payments for materials and subcontracts are readily identified by project, you can record job cost information at the same time you pay the bills. Or, in an accrual system, you can break down by job at the time bills are accrued. In a fully automated accounting system, a single entry to record accrual or payment of a direct cost can accomplish everything you need: records for journal entries, checks, and job cost analysis. To assign a direct cost to the proper job, it's necessary to include that with your entry.

You can do this in several ways, depending on the design of your system. Some systems are set up to use a numerical assignment for each job. You identify costs for that job by the specific job number. In other systems, the entire "coding" system is alphabetical, so you can make your job cost assignment using the job name. You can maximize the advantage of automated accounting procedures if you generate several useful reports from a single entry to the system. In the case of recording materials and subcontractor payments, a single entry provides journal and ledger entries in your general accounting system; identification by job for the job cost routine; accounts payable or check writing; and other reports you might need, such as cash flow analysis and scheduling.

If you don't use a computer in your operation, you'll need to duplicate your reporting from a single piece of information. This may require the creation of several different records. If you use numerical coding for this purpose, remember that the efficiency of numerical coding is only as good as your consistency in assigning the codes to each of these records. If you make mistakes, those mistakes carry through to the subsidiary records; and the more mistakes, the less reliable and useful the whole system becomes. So quality control is essential — in all systems, whether automated or manual.

Let's see how this works using a pegboard system. In a pegboard system, you record costs for materials and subcontract work when you pay the bills. The accounts payable or check writing record requires a second entry to assign the entry to a specific job. The left side (accounting system) entries have to balance with the right side (job cost records). The sum of all right-side entries should also be recorded on job cost cards. We'll cover this in more detail later in this chapter.

Distribution of Overhead Expenses
For the month of September, 20_____

Description	Total	Job #432	Job #437	Job #445	Job #471	All Others
Total hours	416	110	90	88	128	36*
Percentage of total	100	26.4	21.6	21.2	30.8	
Selling expenses (list attached)	<u>\$3,260.18</u>	<u>\$860.69</u>	<u>\$704.20</u>	<u>\$691.16</u>	<u>\$1,004.13</u>	
Fixed overhead (list attached)	<u>\$2,209.60</u>	<u>\$583.33</u>	<u>\$477.27</u>	<u>\$468.44</u>	<u>\$680.56</u>	

*Not included in total - idle time, sick leave, vacation, and shop time

Figure 16-2
Distribution of overhead expenses

Accounting for Overhead

You can't assign overhead to specific jobs the way you can payroll and materials. For this reason, you need some other reasonable basis to allocate these costs.

Finding a good, uniform way to assign overhead isn't easy. It can't be based only on income because income from jobs varies with various phases of completion. In the meantime overhead is a constant and recurring part of that job's cost. Material purchases vary as well, not only by the phase of completion but by the type of job. The only reasonable way to assign overhead is in proportion to total direct labor hours. This can be justified by these factors:

- The percentage of hours spent on any one job represents the degree of commitment to the project or the emphasis placed on it.
- Management's involvement with a job usually varies directly with the labor hours. As labor hours increase, there's usually a corresponding increase in the need for controls, supervision, and planning.
- Several large overhead expenses vary with labor hours — union welfare, payroll taxes, use of trucks and autos, and insurance.

■ No other method of allocation comes as close to truly representing a fair distribution of overhead expenses as does relating them to total labor hours.

There are several ways to assign overhead expenses to jobs on the basis of direct labor hours. Remember, you probably have 20 or more overhead expense accounts. In fact, you probably have more overhead expense accounts in your general ledger than all other expense types put together. It would be too time-consuming to assign a portion of each expense account to each job. It would be meaningless as well. A detailed breakdown would take hours to complete. Fortunately, there's an easier way.

Assignment of overhead is a guess at best. A detailed distribution would have little or no value. The practical and efficient solution is to use the total of your overhead expenses each month. This is illustrated in Figure 16-2. Your overhead expense total is available at the end of each month when you post your books.

Figure 16-2 shows total hours listed on the first line, including 36 hours of time not related directly to jobs. This 36 hours isn't allocated. All you're concerned with on this worksheet is the direct labor by job. You'll use a formula to allocate costs, other than

Check Register

[illegible]

Figure 16-3
Typical pegboard system with job cost ledger

direct labor on specific jobs, among all the jobs. The second line shows the percentage of hours by job classification. Apply these percentages to total selling and overhead expense to find the additional cost each project should carry. Once you've done this, you can assign selling and overhead expense to individual jobs and record them on the job cost ledger cards.

Job Cost Ledger Cards

Accounting for the costs and expenses of several jobs at once can be a burden, especially if it involves going over all entries twice — once for the general ledger and once for cost analysis.

Figure 16-3 diagrams a typical pegboard system for checks. The distribution to accounts for all payments occurs between the check and the middle of the board. The job cost ledger card is placed on the far right. In this position, the check amount is entered again, providing complete cost analysis. This method is intended to ensure that all costs are entered on a job

cost ledger. For that reason, you need to use at least one card for each job. You'll need a card for all other expenses as well. This would include miscellaneous expenses, one-time work and any job categories that aren't accounted for separately.

In the pegboard writing method, the total of all columns posted to all the currently active job cost ledger cards should equal all columns for distribution to the general ledger. The total of all checks will then balance to the distribution columns, and also to the cost control columns.

Materials and subcontract payments are posted directly to the job cost ledger as you write checks to pay bills, but not payroll and expenses. Figure 16-4 shows how to post the payroll and expense totals. You can post the labor totals weekly and expense totals once a month.

If you keep cost records like these, you'll have accounted for all your costs and expenses on a cost center basis. That gives you a tidy and comprehensive

accounts with great care and always know what makes up the balance.

Divide each month's expenses between projects. The completed-contract totals are deferred by the following entry for jobs kept under the completed-contract method.

	Debit	Credit
Deferred Debits	xxx	
Selling Expense deferrals		
Job # 432-R		xxx
Job # 445-S		xxx

These expense account reductions continue through the life of each project, reducing the selling expenses total each month. Fixed overhead entries would be as follows:

	Debit	Credit
Deferred Debits	xxx	
Fixed Overhead deferrals		
Job # 432-R		xxx
Job # 445-S		xxx

These, like the selling expenses, continue through the life of the job.

When these projects are completed, all income, costs, and expenses are recognized at the same time. The job cost ledger has been accumulating the totals for each account. The entry to recognize the completed-contract account is:

	Debit	Credit
Deferred Credits (Income)	xxx	
Income from Contracts		xxx
Materials	xxx	
Subcontracts	xxx	
Direct Labor	xxx	
Selling Expense	xxx	
Fixed Overhead	xxx	
Deferred Debits (costs, expenses)		xxx

By this entry all deferrals are reversed and the income, costs, expenses, and profit or loss are recorded on completion of the job.

If you have no uncompleted work accounted for by the completed-contract method, the balance of the following accounts would be zero:

Deferred Debits	(Asset)
Deferred Credits	(Liability)
Selling Expense deferrals	(Expense)
Fixed Overhead deferrals	(Expense)

You can put together a complete income statement at any time using the job cost ledger system. Even for completed-contract accounts, all profit-and-loss information for each job is readily available in one place. If you use these controls, you can proceed with confidence, knowing that all costs and expenses have been assigned and there will be no surprises at the end of the job.

The advantage of the job cost system is that completed-contract accounts, which are actually not included in profit and loss, can be analyzed apart from the general ledger.

Test Questions:

1. The best way to analyze labor costs is:

- A. According to how payroll taxes have to be computed and paid.
- B. By the job.
- C. By variations between pay periods.
- D. By variations by season of the year.

2. A lot of labor cost overruns are caused by:

- A. Your foreman allowing crews to work too slowly when you're not around.
- B. Too many rules imposed by labor unions.
- C. The difficulty of accurately estimating the real cost of completing tasks.
- D. Excessive idle time and inefficient work schedules.

3. A logical place for completing a by-job analysis of labor is:

- A. In the general ledger, where all transactions are already recorded.
- B. In the payroll register, where all labor is recorded.
- C. In the job cost files, where each job's records have to be broken down.
- D. On time cards, where each employee reports the hours worked on each job.

4. Job cost breakdowns for materials and subcontractors are best performed:

- A. At the time payments are made, because they can be easily identified by job.
- B. With a special analysis at the end of each week, to save recording time each day.
- C. In the general ledger, to ensure that you account for all transactions.
- D. In the job cost subsidiary journal.

5. With a computerized system, you can break down costs by job with:

- A. A very sophisticated computer that is able to figure the job breakdown for you.
- B. An assignment to a specific job at the time you input each transaction.
- C. The assistance of a programmer or systems analyst.
- D. With an investment in specialized programming and operating hardware and software.

6. Job costing for overhead:

- A. Can be performed on the same basis as direct costs.
- B. Has to be done in accordance with the overhead allowance you built into your original bid.
- C. Has to be allocated on some logical basis, but cannot be assigned specifically to each job.
- D. None of the above.

7. The most reasonable way to allocate overhead by job is:

- A. In the same proportion as direct labor.
- B. On a strictly itemized basis.
- C. On a proportionate basis based on sales.
- D. In such a way so as to equalize profits as much as possible.

8. On a manual pegboard system, direct costs are recorded:

- A. On a separate register, requiring duplication of entries.
- B. On the check register, requiring a detailed breakdown at the end of the month.
- C. Only at the end of each day.
- D. On a job cost ledger card, the sum of which will equal general ledger distribution columns.

9. Completed-contract monthly entries to record expense deferrals are made with:

- A. A debit to each expense and a credit to the deferral account.
- B. A debit to the deferred debits account and credits to expense and deferral accounts.
- C. A debit to the deferred debit account and credits to each selling expense general ledger account.
- D. A debit to expense deferral accounts and credits to cash.

10. Under the completed-contract method:

- A. All income, costs and expenses are booked with a single entry.
- B. All deferral accounts are zeroed out to profit and loss.
- C. Income entries made previously are reversed.
- D. All of the above.

11. The purpose of analyzing labor costs is to figure out:

- A. The actual cost of completing projects and their stages.
- B. What the competition pays its labor force.
- C. How efficiently your employees are working when you're not there.
- D. What you owe in payroll taxes.

12. Breaking down labor costs in an automated system:

- A. Is a highly complex task requiring training in computer programming.
- B. Is impossible in an automated system.
- C. Can be achieved at the time accounting entries are made.
- D. Is not necessary as it can be done more quickly by hand.

13. The cost accounting system:

- A. Requires skilled accounting training.
- B. Demands full automation without exception.
- C. Doesn't have to be complicated.
- D. Is the same as your general ledger.

14. The term "direct" labor means:

- A. Payments are made to a garnishing agency directly instead of the employee.
- B. Labor is identified by job and is a direct cost.
- C. Withholding rates directed by the government.
- D. None of the above.

15. The job cost ledger card is a record that shows:

- A. The cost of keeping books by hand or on a computer.
- B. Job cost breakdown for the general expenses categories.
- C. How entries are made to your general ledger.
- D. How direct costs are classified by each job.

Petty Cash Funds

Like most business owners, builders need ready cash around the office to pay for miscellaneous small expenses. But you might lose not only money, but also legal tax deductions, if you use haphazard methods to keep track of this cash. Don't let small amounts of cash bleed out of your cash flow and build up to big losses over time. Keeping undocumented cash in a drawer or box invites pilfering.

What you need is a well-documented and controlled office fund large enough to make incidental cash payments. The fund must be easy to use, yet give you all the accounting data you need to document the business expenses you pay out of it. You can't deduct from taxes what you can't document.

Some people set up their petty cash fund by withholding money from a bank deposit. Others simply write a check payable to "Cash." I don't recommend either method.

When you withhold cash income from bank deposits to set up and supply the fund, you make it impossible to use deposit records to account for sales. Recording all sales on deposit records is one of the best ways to clean up your record keeping. When you withhold sales dollars from the bank, you blur your profit picture and all your sales-related analyses.

Books and records should be set up so that all entries can be traced to their origin. But you can't make accurate entries to the general ledger if you make payments from a fluctuating cash fund that's the product of money held back from deposits.

If you write checks payable to "Cash" whenever you need funds, here again there's no accurate accounting entry to verify and balance the office cash fund. You can't code the check accurately because the amount is not immediately deductible. And since you don't know how the cash will be spent when you record the check in the check ledger, you can't distribute the amount of the check among your various expense accounts.

A far better alternative to either of these solutions is to use the *imprest system*.

■ The Imprest System

An imprest system accurately controls the flow of cash payments and documents them fully on your check register. It also lets you record your deductible petty cash expenses in the general ledger. To begin, set up an account in the ledger as a separate petty cash fund. The balance of this ledger account doesn't change at all unless you change the amount you designate for the fund.

The actual money in the imprest petty cash fund varies as money is spent. But confine the entries in the general ledger to the total amounts paid out of the fund and paid back to it from an expense account in the period of the entry. If you keep a \$300 petty cash fund and you pay out \$50 in expense one week, the actual fund balance is \$250. The only time you make a general ledger entry is when you write a check from expenses to bring the fund back up to \$300. The check is a reduction of cash for expenses, and this is recorded in the ledger as an increase to one or more expense accounts. So the general ledger doesn't adjust each and every payment you make from petty cash, only the amount expensed to reimburse the fund. Cashing the check brings the fund back up to \$300.

The imprest method has these advantages:

- It's easily maintained
- Controls are built in — you balance the fund each time it's reimbursed
- The fund is isolated from your checking accounts
- The documents supporting the petty cash checks also verify the increases and decreases to petty cash
- Entries to the general ledger don't require special effort
- Cash shortages are cut down

The Size and Use of the Fund

Good business practice dictates that you handle most business expenses by check. But realistically, every business must make some payments in cash.

The amount of the fund depends on the requirements of your business. Petty cash payments shouldn't be large compared to those in the rest of the operation. The average payment is for a miscella-

neous expense, not a major one. But the fund should be adequate to pay the following kinds of expenses:

- Expenses you can't pay by check
- Expenses that are too small to justify a check
- Incidental expenses that have been paid on your behalf, and that you are paying back (usually to an employee)

Estimate the amount of cash you need to cover payments in these categories. But keep two points in mind when you decide on the size of your petty cash fund: Too high a petty cash balance leaves some of your cash idle indefinitely. This invites theft. Too low a balance means that you're likely to run out of funds often. That means you'll have to pay back the fund too frequently. Most operations need to keep at least \$50 in petty cash. You may require much more, depending on the size of your payments, especially if creditors have placed you on a C.O.D. ordering status because of collection problems, or if you pay many of your bills in cash. But try to eliminate any such cash payments and reduce the size of your petty cash fund to less inflated amounts. Too much cash payment in an operation makes overall controls more difficult.

To *increase* the balance of your cash fund, issue a check to the fund *over* the amount needed to pay it back. Then make the following entries in the general ledger:

- 1) Raise the fund balance by adding the amount of the increase to the old balance
- 2) Reflect the increase in the account on which the check was drawn

Petty Cash		
	Debit	Credit
Balance Forward	50.00	
Expenses	----- 13.85	36.15
Reimbursed from Cash	----- 46.15	
New Balance Forward	60.00	

Cash In Bank		
	Debit	Credit
Balance Forward	xxxx.xx	
Reimburse Petty Cash		36.15
Increase Petty Cash		10.00

To *decrease* the fund balance, let the fund dwindle below your intended balance, then replenish the

petty cash fund expenses *less* the amount of the decrease. For example, reduce petty cash by \$10 as follows:

Petty Cash		
	Debit	Credit
Balance Forward	50.00	
Expenses	----- 13.85	36.15
Reimbursed from Cash	----- 26.15	
New Balance Forward	40.00	

Or you can deposit part of the fund into the general bank account, decreasing the fund by that amount. Make only one entry to the ledger in this case:

Cash In Bank		
	Debit	Credit
Balance Forward	xxxx.xx	
Reimburse Petty Cash		26.15

Controlling Petty Cash

Controlling the flow of information for cash payments isn't difficult with an imprest fund. All payments from the fund are supported by a voucher or receipt. Figure 17-1 shows a petty cash receipt that serves four purposes:

- 1) It's a signed document verifying that someone received cash from the fund.
- 2) It's a support document for accounting entries, coded for proper classification.
- 3) It's a document to support unreceipted expenses (such as repayment of mileage on company business).
- 4) It's a uniform way to describe and identify payments from the fund.

All funds taken from the cash box should be replaced by a completed receipt. Make one person responsible for the fund. That person should either write the receipts or see that the form is filled out before funds are removed. Make sure the person responsible knows that, at any time, the total of all cash plus the total of all petty cash receipts should equal the designated fund balance.

Prepare a petty cash summary as shown in Figure 17-2 at least once a month. Making up this summary is like balancing a bank account because you're

accounting for the flow of cash in and out of the fund. If your petty cash volume is high, expect small unexplained discrepancies. The report also summarizes your accounting entries for each payment into the fund. Keep these reports in a small binder, or attach them to the collected receipts and file them to support pay-back checks.

The imprest petty cash fund is a form of budgeting. You estimate the amount of the fund based on your expected cash payments for a specific period of time — one month, for example. If your actual cash expenses begin to exceed this estimate, look for a way to reduce the frequency or the amount of some of your cash payments.

It might seem like an unimportant detail to develop such a rigid system for small expenses. But considering the level of federal (as well as state and local) taxes, and their effect on your profits, it's time well invested.

For example: Let's say your monthly cash expenses add up to \$85 and your effective overall tax rate is 32 percent (combined effect of federal, state, and local taxes). That means the value of having a system to document these expenses is:

$$\begin{aligned} \$85 \text{ per month} \times 12 \text{ months} &= \$1,020.00 \\ \text{Tax benefit (32\%)} &= \$326.40 \end{aligned}$$

The value of tracking expenses is \$326.40. That's a significant enough number in itself. But there's more. Having the fund in place helps you to capture and document expenses you might miss without the fund. For example, you might spend a few dollars each week on legitimate business expenses. But without a fund for reimbursement, you tend to lose receipts or forget what they were for. The imprest petty cash fund helps you claim all the deductions to which you are entitled.

Amount \$ _____	Number _____
Petty Cash Receipt	
_____ 20 _____	
Description _____	
Charge Account Number: _____	
Approved _____	Received _____

Figure 17-1
Typical petty cash receipt

Petty Cash Summary		
March 31, 20_____		
Balance, 3-1-_____		\$300.00
Paid from petty cash:		
Office supplies	21.60	
Postage	30.00	
Bridge tolls	4.50	
C.O.D. expense	11.45	
Coffee	3.60	
Donations	15.00	
Total paid out	86.15	
Cash shortage	3.11	
Total reduction		89.26
Balance in fund		210.74
Payment to petty cash:		
3-31-_____, check 412		89.26
Ending balance		<u>\$300.00</u>

Figure 17-2
Petty cash summary

Test Questions:

1. You probably need a petty cash fund because:

- A. It's a good place to put cash payments made by your customers.
- B. Employees sometimes need to borrow a few dollars.
- C. It's convenient to cash checks for employees or customers.
- D. It allows you to capture and record minor expenses paid for in cash.

2. You can set up an initial petty cash fund by:

- A. Withholding cash from a bank deposit.
- B. Writing out a check to "cash."
- C. Putting additional capital into the business in the form of cash.
- D. None of the above.

3. The problem with writing a check payable to "cash" to pay for minor expenses is:

- A. The IRS won't allow you to use your business account for unexplained payments.
- B. It looks suspicious, because business owners almost never write checks that way.
- C. It doesn't provide you a method for capturing minor expenses and recording them in your books.
- D. All of the above.

4. The "imprest system" of petty cash is:

- A. Set up so that you're always reimbursing the fund to a pre-established level.
- B. Constantly changing in balance based on the volume of receipts submitted.
- C. Given the name because when it was first developed, accountants were very imprest with the results.
- D. The only method approved by the IRS.

5. Your petty cash fund's level should be established:

- A. According to the cash available at the time you set it up.
- B. Based on need, so that you need to reimburse it only once or twice per month.
- C. At no more than 5 percent of your monthly sales average.
- D. By your accountant.

6. To increase the balance of a petty cash fund:

- A. Write a check above the reimbursement amount, and increase the balance in the general ledger.
- B. Write a check above the reimbursement amount, but make no changes to the permanent balance in the general ledger.
- C. Write a check below the reimbursement amount; the difference between that and the total of receipts will increase your fund balance.
- D. Don't reimburse receipts one month, so that you have more money available in the fund.

7. To decrease the petty cash fund balance:

- A. Write a check to reimburse the fund, minus the decrease amount; but don't change the general ledger balance.
- B. Write a check to reimburse the fund, minus the decrease amount; also decrease the fund balance in the general ledger.
- C. Simply let the cash balance fall to the level you want, and don't make any special entries.
- D. Write a reimbursement check above the level required to reimburse the fund.

8. Control over petty cash consists of:

- A. Completion of a worksheet by your accountant.
- B. Accounting for the total of cash plus receipts.
- C. Reimbursing to the desired balance, regardless of the receipt totals.
- D. Filling out a petty cash receipt form.

9. Control over the fund itself:

- A. Is based on the honor system, with each employee being asked to always replace cash with a receipt.
- B. Should be left only to the accountant or the company president.
- C. Is not important, since the amount of cash involved is very minor.
- D. Should be left with one person, who should reimburse those presenting proper receipts.

10. A petty cash summary:

- A. Summarizes the transactions and should be prepared each time the fund is reimbursed.
- B. Is another name for a petty cash receipt.
- C. Is part of the accounting record, and is not of concern to the contractor.
- D. Should always come out exactly to the penny.

11. Because it's desirable to run all transactions through the books:

- A. All expenses must be paid by check, without exception.
- B. Petty cash funds are necessary for documenting unavoidable cash outlays.
- C. Cash expenses are not deductible even with a receipt.
- D. Petty cash is not considered part of your bookkeeping system.

12. The level of a petty cash fund is determined by your needs. Most operations need to establish a fund of at least:

- A. \$50.
- B. \$100.
- C. \$200.
- D. \$300.

13. Petty cash funds are most appropriate for:

- A. Expenses too minor to justify writing a check.
- B. Anything you don't want to appear in your books.
- C. The occasional off-the-books lunch.
- D. Payment of non-deductible payments.

14. All money removed from petty cash is:

- A. Non-taxable profit to the owner.
- B. Documented by way of a canceled check.
- C. Written off as a loss.
- D. Replaced with a receipt.

15. Your petty cash fund consists of:

- A. Postage stamps and postal receipts.
- B. Bills payable.
- C. Currency, change and receipts adding up to the imprest balance.
- D. Documents showing your attempts at balancing the fund.

Balancing the Checking Account

The only way to know your *true* cash balance at any time is to balance your checking account once a month when you post your monthly general ledger entries. Trouble starts when you skip a month or when you do the job inaccurately or incompletely. Be sure to save any adjustment memos you receive from the bank during the month. At the end of the month sit down with the bank's statement and balance your account, using this chapter as a guide.

Many builders view their checking account as a mystery. But there's no mystery to account balancing. The bank statement shows a balance different from your checkbook only because the bank rarely records entries on the same day as you do. You increase your balance for deposits when you make them, and decrease it for checks as you write them. But the bank records deposits, automatic transactions and checks only when they find out about them.

■ The Ten Steps to Accurate Reconciliations

Here are ten steps for balancing your bank account. Follow these steps completely and accurately and your account should balance every time.

- 1) Start with a "good" balance for the previous month. A balanced account for the month just past is the first step toward balancing your account this month. Otherwise you risk carrying mistakes forward and never finding them. This means that you must balance your account every month. If you've never bothered to balance your account before, you'll have to *construct* a balance the first time. Constructing a balance is discussed later in the chapter.

- 2) Account for all *canceled* checks you've received from the bank in this month's statement. Canceled checks are the ones the bank has paid and deducted from your account balance. First, organize your returned checks into numerical order. Then place a mark in your check register next to each check listed on the statement. This isolates any unmarked items for the next step.
- 3) List the check numbers and the amounts of uncleared checks each month. Look at last month's list to see whether last month's outstanding checks cleared the bank this month. Most previously outstanding checks should have cleared by now. Cross off your list all previously outstanding checks that have now cleared. On this month's list of outstanding checks, you'll record any checks that were outstanding last month and that still haven't cleared (see Step 5).
- 4) In your check register, find this month's starting point — the point at which you balanced last month's statement. This gives you the balance after the last canceled check from last month was either received or listed on the previous outstanding checks list. This is also the point at which the last booked deposit was shown on the previous bank statement or was a deposit in transit (a deposit recorded in your checkbook but not on the statement). Make each month's starting point logical and consistent by balancing your account as of the bank statement date.
- 5) Prepare the current month's list of outstanding checks. Include all outstanding checks from last month that haven't cleared the bank yet, plus all outstanding checks in the current month. Make this list on the finishing point or the last day of the statement period — next month's starting point — to catch all outstanding checks. This step is a likely place to make errors, so double-check all amounts and math.
- 6) Make sure that last month's *deposits in transit* appear on this month's statement (see Step 8).
- 7) Compare deposits listed in the checkbook to deposits reported on the bank statement. If there are any amount differences due to your math errors, adjust your checkbook balance. These differences can occur because of addition errors on deposit slips. You hope you catch this kind of mistake before you take deposits to the bank. But errors do slip through sometimes.

Place a mark next to each deposit listed on the bank statement as you find it in the checkbook. This procedure is just like comparing the cleared checks to the recorded checks; here you're accounting for all deposit entries in the checkbook *and* the general ledger with the bank statement and adjusting every deposit amount that is off.


- 8) Were there deposits made this month that aren't on the bank statement? Deposits not listed on the statement should only be deposits made at the end of the statement period. The bank may close its daily accounting before it records your final deposit of the month. When this happens, record the amounts as deposits in transit.
- 9) You've been marking each item on the bank statement as you go along. Soon nearly every item on the statement is also checked off on the check register or your deposit record. What are left over are bounced checks you've received, bank charges, automatic loan payments and the like. Such items reduce your checking account balance. All such adjustments should be listed on the bank reconciliation page or on an attached schedule.
- 10) Once you've accounted for all checks, deposits, and adjustments on the bank statement, and you've used the statement to check your entries in the checkbook, find out if you are in balance. See below.

Figure 18-1 shows a typical bank reconciliation form. Both the bank's balance and the checkbook's balance are adjusted to an agreed balance. Most of the adjustments on the bank's side are for timing differences. Deposits in transit are added to the balance, and outstanding checks are subtracted from it. A \$10.00 adjustment is listed to show a bank error. They recorded a check at \$10.00 more than the actual amount. Adjustments on the checkbook side may be for checkbook errors or for items on the statement you see for the first time.

Figure 18-2 shows the adjustments made on either side of a reconciliation form to arrive at a reconciled balance. Outstanding checks and deposits in transit are always adjustments to the bank's balance. Miscellaneous adjustments must be made to either the bank or the checkbook, depending upon which side is incorrect.

A false way to summarize the balancing of a bank account is to manipulate the bank's balance so it becomes the checkbook's balance:

RECONCILIATION



MIDFIELD BANK
MAIN OFFICE

	Bank	Checkbook
Ending Balance	126.19	1296.34
Add: Deposits in Transit	<u>1314.80</u> 1440.00	
Subtract: Outstanding Checks	(169.05) <u>1271.94</u>	
Adjustments	10.00	(14.40)
Balance	1281.94	1281.94

Note: Deposits in transit, outstanding checks, and adjustments are listed in the schedule attached.

Figure 18-1

Typical bank reconciliation form

Bank's ending balance	\$126.19
Deposits in transit	1,314.80
Outstanding checks	(169.05)
Subtotal	1,271.94
Adjustments	24.40
Checkbook's ending balance	\$1,296.34

The “Adjustments” line is the amount required to adjust the bank balance to the checkbook balance. The trouble with this method is that it doesn’t reveal the true balance of \$1,281.94 as shown in Figure 18-1. Don’t use this short-cut method. You must have a true balance between the statement and the checkbook to support the monthly ending balance in the general ledger asset account for Cash.

Figure 18-3 summarizes the flow of balancing entries from one month to the next. Think of outstanding checks as blocks of cash that the bank has not yet taken from your account — a timing difference. Think of outstanding deposits — deposits in transit — as your money, deposited but not recorded by the bank at the time monthly statements were prepared. Watch for adjustments and act on them promptly. Correct bank errors by calling the bank and pointing them out. Checkbook errors require that you adjust the checkbook balance. You’ll never know your

Outstanding Checks

Date _____

Check #	Amount
127	\$12.00
128	126.00
131	18.94
133	12.11
Total	\$169.05

Adjustments

Date _____

Adjustments: Bank errors
(Call the bank and straighten it out.)

Example:

Check recorded \$10.00 over
amount of check \$(10.00)

Deposits in Transit

Date _____

Date of Deposit	Amount
9-29	\$600.00
9-30	714.80
Total	\$1314.80

Adjustments: Checkbook
(Adjust the checkbook balance.)

Examples:

Returned check \$(15.80)
 Service charge (2.60)
 Math error 4.00
Total \$(14.40)

Figure 18-2

Adjustments needed to reconcile a balance

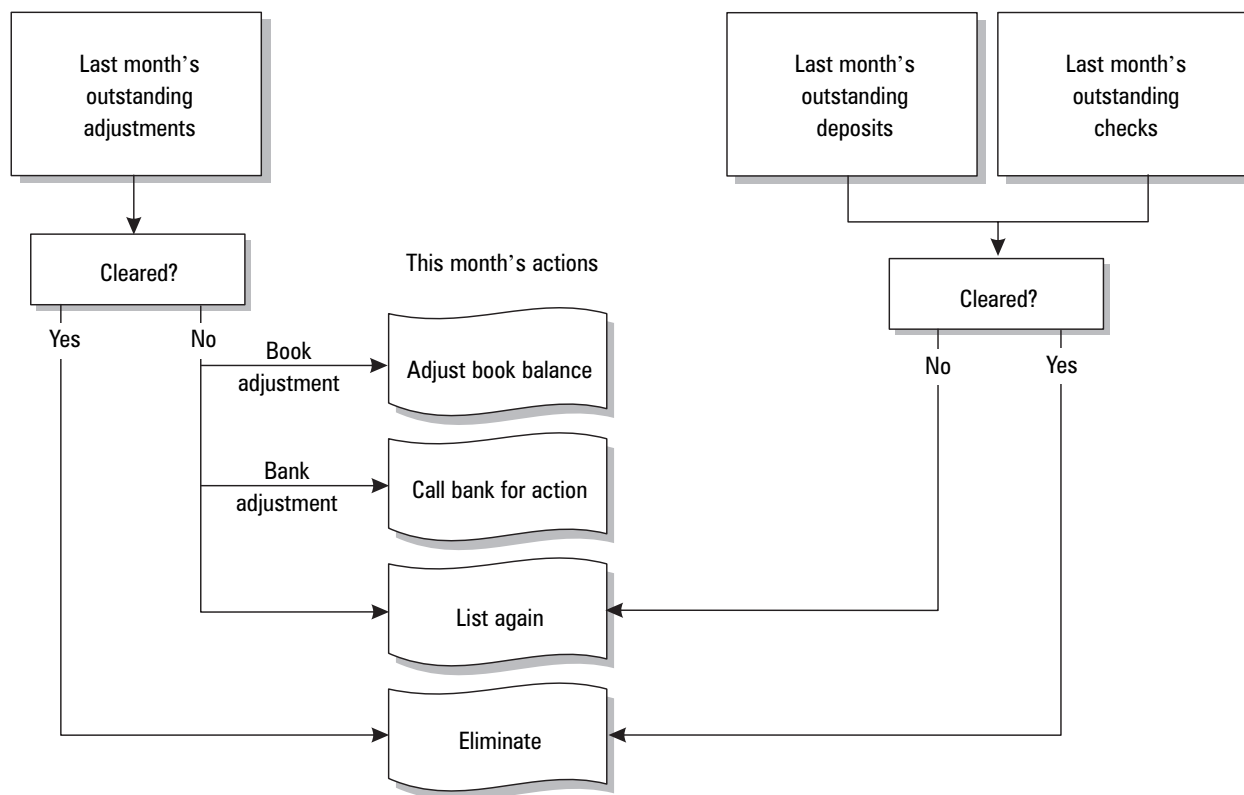


Figure 18-3
Clearing last month's balancing entries

true balance if you balance deposits and checks but don't make adjusting entries.

Figure 18-4 summarizes the right way to balance your checking account. The bank statement will only agree with your checkbook (with no adjustments) if your account has no activity for most of the month.

Adjustments can be made to either side, the bank or the checkbook, depending on the nature of the adjustment. Only adjustments for timing entry differences or bank errors adjust the bank's side. Errors in math, special charges, and automatic loan payments are the principal adjustments to the checkbook. Other checkbook adjustments relate to deposits — deposit slip errors, returned checks, or totals incorrectly posted to the checkbook.

Once you've accounted for every item in the checkbook and on the bank statement and made all the adjustments to both balances, see if the checkbook balance and the statement balance agree.

If the balances don't agree, check your entries again to make sure you haven't made any incorrect

adjustments. If you're still not in balance, go through your statement, checks, and checkbook again.

- Is the math in your checkbook correct?
- Is the math correct on the outstanding check list?
- Are cleared checks recorded at the same amount on the bank statement as they were in your checkbook?

Compare your checkbook amounts to the imprinted number in the lower right-hand corner of each check. These are entered on each check by the bank, and hard-to-find errors can slip through. If you still can't find the mistake, check everything again. Look over the bank statement very carefully. Are all the entries accounted for? Look for math errors on the reconciliation page itself. Don't give the bank the benefit of the doubt about anything on the bank statement. People in banks can make mistakes just as easily as you can. Their accounting systems catch most errors, but no controls are foolproof. Mistakes do come through.

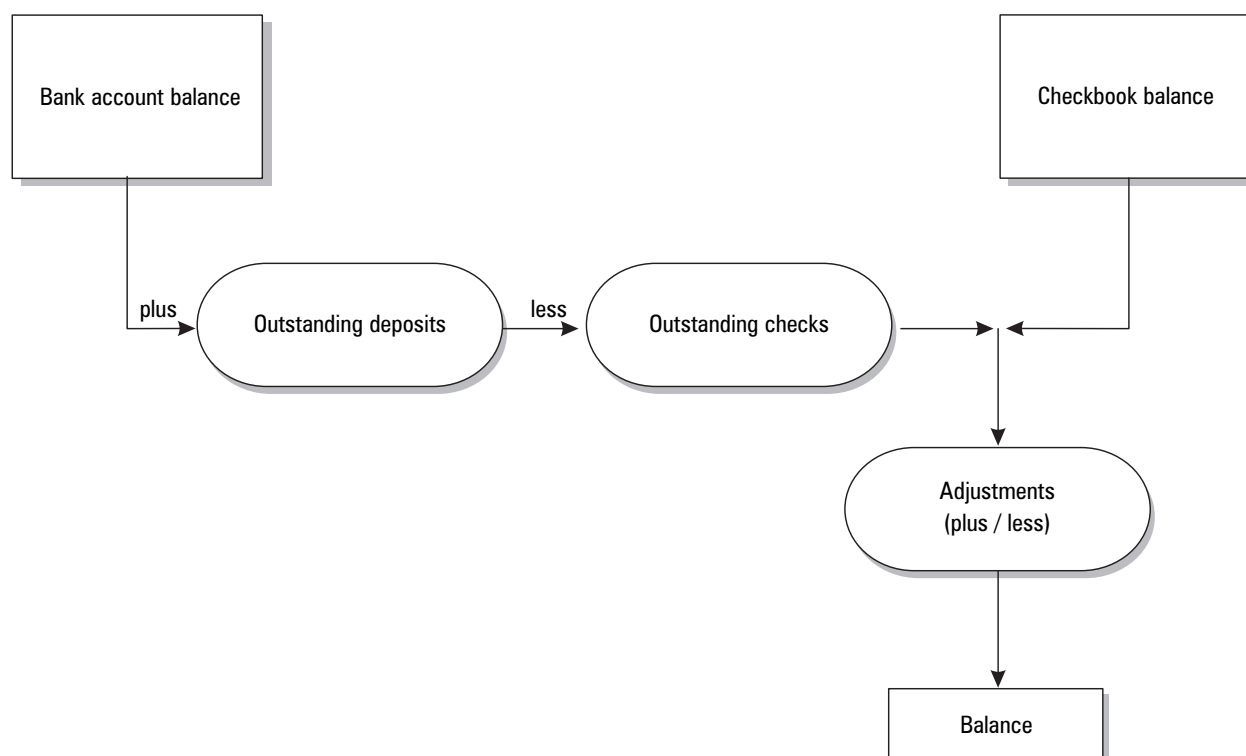


Figure 18-4
Summary of adjustments

Handling Returned Checks

A special problem arises when part of your deposit includes checks that get returned. Checks can "bounce" for several reasons. The account might have NSF (non-sufficient funds) or may be closed; or the person who wrote the check might have placed a stop payment. Tracking and resolving the situation is a separate problem; for now, we're going to deal with how to manage returned checks as part of your bank reconciliation.

If you receive a returned check notification from your bank for a check deposited this month, the procedure is fairly easy. Take the following steps:

- 1) Reduce your bank balance by the amount of the returned check. This corrects your current balance by matching it to the amount the bank has reduced your balance. You don't want someone else's bad check to cause your checks to bounce.
- 2) Make a journal entry in your records to reflect the reduction. Any bank fees also need to be accounted for. For example, if the check was for \$100.00

and the bank assessed a fee of \$12.00. If this was a current month sale, the entry would consist of a debit to your revenue or sales account, a debit to the expense account Bank Charges, and a credit to cash:

	Debit	Credit
Sales	100.00	
Bank Charges	12.00	
Cash		112.00

- 3) If it's a charge sale, the debit is made to accounts receivable instead of sales, the debit to Bank Charges, and the credit to cash:

	Debit	Credit
Accounts Receivable	100.00	
Bank Charges	12.00	
Cash		112.00

Contact the company or person who wrote the check to determine the problem, and request a replacement payment. Be sure to ask for reimbursement of your bank fees as well.

If the bounced check was deposited in a prior month, you need to take the same steps as above; but you have an additional problem. When you balance your bank account, you'll need to show the adjustment on your reconciliation. Often an out-of-balance condition results from the failure to make an adjustment in your running balance for returned checks. It's easy to find. Remember, every adjustment on the bank account has to show up in your running balance. When an entry isn't made in your books, it'll throw the account out of balance. So a correcting entry needs to be made.

In a well-kept set of books, the balance according to your bank reconciliation will always agree with the balance of Cash in Banks in your general ledger (plus or minus outstanding correcting entries). Make your standard that these balances always agree. If your general ledger balance isn't the same as the reconciled balance, it means that you didn't make all of your correcting entries. It isn't enough to determine your true cash balance and make that adjustment in your checkbook. You also need to balance the general ledger account so that it reports everything precisely. If you aren't in balance, trace back through recent months to locate an adjustment that wasn't entered into your books.

Handling Voided Checks and Stop Payments

You have another adjustment problem when you void checks previously written. The procedure depends on whether you void a check written this month or prior months.

If you void a check you wrote this month, it's a simple procedure. You increase your checkbook balance by the amount of the voided check; and you make a reverse journal entry debiting cash and crediting the account you wrote the check to. Both steps are necessary. As long as the check you void was written within the month, your account will stay in balance.

When you void a check written in a previous month, the procedure involves extra steps. First, you may need to place a stop payment on the check if it has disappeared. In this case, you'll need to make a journal entry debiting Bank Charges and crediting Cash in Bank for the stop payment fee. You'll also need to make an entry to debit Cash in Bank and credit the account to which you wrote the original check.

The additional step — the one most often overlooked — is removing the voided check from your list of outstanding checks. A check written in a previous month and not yet cleared will be carried forward

from one month to the next on your list of outstanding checks. When the check is voided or stopped, it's no longer outstanding; so it needs to come off your list.

Take these two steps to ensure you remember to remove the voided check. When you enter the increase in your checkbook, make the entry by itself so it's easier to find; and identify the check number. Then go back to last month's outstanding check list and make an easy-to-find reminder for yourself: a post-it note, a bright-colored notation, or some reminder. You don't want that check to show up in the current month's outstanding list, because if it's carried forward, you won't be able to balance the account at the end of the month.

In all these special situations — voided or stopped checks, returned checks, bank adjustments — it's helpful to figure out how to handle them and what entries and adjustments you need to make. Ask yourself, what's happening to the bank balance? Does the adjustment increase or decrease the balance? Where does the adjustment get made? What do you need to do to keep the account in balance?

The key is to remember that all entries made by the bank must be made in your checkbook and in your general ledger. So you'll need to adjust the running balance and make a journal entry for every adjustment the bank enters.

A Checklist for Balancing Your Account

Here is a checklist of errors that can cause your account to be out of balance:

- An incorrect or nonexistent starting point
- Unadjusted corrections from previous months
- Bank errors in recording check totals
- Math errors on outstanding check lists
- Checks listed for the wrong amounts on outstanding check lists
- Previous months' outstanding checks still outstanding and not listed again
- Deposit errors not recorded
- Deposits in transit not recorded
- Returned checks not recorded or recorded twice

- Adjustments made to the wrong side (doubling the amount out of balance for those adjustments)
- Unrecorded adjustments for service charges, bank-provided services (such as printing your checks) or automatic loan payments
- Errors in recording the amount of deposits in the checkbook
- Trying to balance to the wrong finishing point
- Math errors on the bank reconciliation summary form

Many other kinds of errors and omissions can occur. One-time or very unusual circumstances often arise which are especially difficult to find because they *are* unusual.

■ Keeping Track of Your Balance

In a manual check-writing system you usually carry the balance forward with each deposit and check. Some pegboard systems also provide space to keep the balance. But for many check-writing systems, including some pegboards, there's no space for this function.

But you must keep track of your balance. If your pegboard system doesn't provide space, you must do it separately. You need a separate daily balance to provide a math control for your checkbook. Keep a separate daily balance with a record of bank balance form like the one in Figure 18-5. This math control helps you balance your account at the end of the month. By adding the columns for deposits and for checks you can quickly determine the totals for the month. The balance forward, plus deposits and less checks, should equal the last amount in the *Balance* column. If it doesn't, there's a math error somewhere on the form.

Add and list each day's checks in the *Amount* column. If you write several checks on one day, add them together. Make sure there are no duplications or omissions by indicating the range of checks you write that day in the *Check Numbers* column: "#s 110-117" for instance.

List each deposit in the *Deposits* column on the line for the day the deposit is made. Add today's deposit to the balance for the previous day in the

Balance column and subtract today's checks in the *Amount* column to compute the new balance.

Include on this form all adjustments to the checkbook such as previous months' errors, bank charges, and returned checks. Isolate these adjustments. If possible, put them on a separate line so they're easy to trace. Handle the current month's adjustments the same way; record any adjustments made by the bank during the month whenever they send you an adjustment memo. A notice to increase is listed on a bank *credit memo* and a notice to decrease your balance is listed on a debit or *charge memo*. Refer back to Figure 9-2.

How to Construct a Balance

Chances are that if a bank account has been out of balance for months, you didn't begin with a good starting point. Find the most recent good balance and work your way forward, balancing each month until you get to the present balance. Your other alternative is to give the bank credit for its accuracy and rely on its balances. Banks have good controls for giving accurate service to their customers. They compete with one another for your business, and accurate, professional statements and support documents are one way to do this. The law requires banks to maintain certain controls and records, so their reports to you are likely to be accurate most of the time.

Here's how to construct a balance where there was none before. First, determine your outstanding checks as of the end of the statement period. Go back through several months' cleared checks and find out what checks haven't cleared. Next, figure out whether there are deposits in transit at the end of the most recent statement period. Then adjust the bank's balance by adding any deposits in transit and subtracting all your outstanding checks. The result is a constructed balance. Enter it in your checkbook at the beginning point, the date the most recent statement was prepared. Balance your account at the end of each statement period from then on.

Old Outstanding Checks

Most balancing adjustments are for timing differences. You write checks on one date and the bank clears them on another date, sometimes in the same month and sometimes in the next. But from time to time a deposit in transit or an outstanding check doesn't clear the following month either.

Record of Bank Balance					
General Account					
Month of _____					
Date	Deposits	Amount	Check Numbers	Amount	Balance
Balance forward →					
1					
2					
3					
4					
5					
6					
⚡					
28					
29					
30					
31					
Total					

Figure 18-5
Record of bank balance

Call the bank when a deposit is lost and compare your duplicate deposit slip to their records. The deposit may have been applied to someone else's account, or it may have been posted late. Make sure the bank corrects its error in time for the current month's statement.

When outstanding checks remain on your list for more than 90 days, contact the payee. The check may have been lost in the mail. Call the bank if that is the case and issue a *stop-payment* order. Most banks charge for this service, but it's the only way to protect yourself against a possible double payment. Once the bank determines that the check in question has not been cashed, reissue the payment. This keeps check adjustments up to date.

After the bank issues a stop-payment on the check, record the amount of the check as an increase

to your account. At the same time, remove the check from the outstanding list. Reissuing the payment once again decreases the balance in your checkbook by the amount of the stopped check.

Keeping Your Perspective

You should spend as much time balancing your checking account as you need to assure yourself it's been done correctly. But you also have to decide when enough is enough.

This raises a question. Let's say you're out of balance by three cents, and you've checked everything three times. You've invested three hours. Is the three cents worth the effort? That's not as easy to answer as you might think. The problem is that there could be a number of things adding up to the out-of-balance

condition. For example, you could be wrong by \$1,000 in one direction, and \$1,000.03 in the other direction.

Some guidelines for dealing with very small amounts:

- 1) Check everything twice. Once you're certain that the most likely problems have been checked, you can probably assume the small amount is not worth the time required to investigate.
- 2) Check and compare only the cents (everything to the right of the decimal point) when your out-of-balance problem is less than a dollar, or when the amount you're out of balance includes cents. This will help you find the problems more quickly.
- 3) Write off very small amounts, once you've checked everything, to the *Cash Over or Short* account. Don't waste valuable time correcting insignificant problems.

Test Questions:

1. The best way to get a true balance in your account is to:

- A. Check with the bank and go with their balance.
- B. Balance the account every month.
- C. Stop using the account until everything clears.
- D. Ask your accountant for help.

2. A “good” starting balance is:

- A. One with a positive balance and not a negative balance.
- B. Resolving the bank’s errors.
- C. The discovery that you have more cash than you thought.
- D. A balance forward with a balanced account.

3. A bank reconciliation is nothing more than:

- A. Accounting for all of the differences between your balance and the bank’s balance.
- B. Resolving the bank’s errors.
- C. A form used by accountants.
- D. An agreement with your bank on the amount of monthly charges they will assess you.

4. The bank reconciliation includes:

- A. Listing and accounting for outstanding checks.
- B. Identifying deposits in transit.
- C. Listing all adjustments and errors, and then correcting them.
- D. All of the above.

5. If you account for every item in your checkbook, and you still can’t balance:

- A. Call the bank and ask them to find their error.
- B. Adjust your cash balance for the difference.
- C. Look for math errors in the checkbook or in your lists, and make sure you made all corrections from last month’s reconciliation.
- D. Write a check for the difference and deliver it to the bank.

6. Keeping a record of your bank balance outside of the checking account provides you with:

- A. One more form to fill out each day.
- B. Foolproof verification of the balance.
- C. A useful tool for controlling your account balance and completing the reconciliation each month.
- D. A record your bank will want to see before they will correct their error.

7. Your account will be out of balance if:

- A. You void a check from last month and forget to remove it from the listing of outstanding checks.
- B. You make a math error on a deposit slip that the bank corrects.
- C. You overlook an adjustment journal from the previous month for a math error made in the cash account.
- D. All of the above.

8. A “deposit in transit” is one that:

- A. Is currently being transferred from one branch of the bank to another.
- B. Was made by the end of the month, but not recorded on the current bank statement.
- C. Was recorded on the bank statement, but not written in your books until the following month.
- D. Is being reviewed by the bank’s operations officer because it contained a math error.

9. When you add a returned check in error, instead of subtracting it from your balance:

- A. You will have a higher balance than your checkbook shows.
- B. It won't matter because you will have redeposited the check anyhow.
- C. Your balance will be overstated by twice the amount of the deposit returned.
- D. The error reverses the original deposit so no further adjustment is needed.

10. You construct a beginning balance by:

- A. Making enough deposits to bring your balance up to the level shown by the bank.
- B. Starting with the bank's balance, adding any deposits known to be in transit, and subtracting all outstanding checks.
- C. Erasing your current balance and replacing it with the amount the bank says you have.
- D. Reconciling your account in the prescribed manner.

11. Checks returned to you by your bank affect your reconciliation by:

- A. Requiring you to increase your checkbook balance.
- B. Requiring you to decrease your checkbook balance.
- C. Requiring you to contact the bank to fix the bank error.
- D. Changing your list of outstanding checks.

12. A returned check means that:

- A. Someone has non-sufficient account funds or stopped payment on their check to you.
- B. The bank has reduced your account balance.
- C. You need to make a journal entry showing the adjustment in your books.
- D. All of the above.

13. When you void a check written in a previous month, you also need to:

- A. Put more money into your account to cover the difference.
- B. Force the balance, otherwise it won't work this month.
- C. Remove the check from your list of outstanding checks.
- D. Reduce your balance so that it will remain correct.

14. An easy way to remember how to make special adjustments is to remember that:

- A. All entries made by the bank have to also be made in your records.
- B. The net difference is simply added or subtracted so you'll always balance.
- C. The bank has to be watched or they will add fees without telling you why.
- D. No one really understands how or why accounts go out of balance.

15. Returned checks that were deposited this month require:

- A. A journal entry only.
- B. A journal entry and adjustment to your running balance.
- C. An adjustment to your running balance only.
- D. An adjustment on your bank reconciliation, but no bookkeeping entries.

Accounting for Estimates

Any builder who controls job expenses and costs will have a higher success ratio than one who doesn't. Even in a small struggling operation, controls aren't difficult if the books and records are informative and let the builder make detailed comparisons.

A consistent approach should help you improve the reliability of your estimates. That approach requires intelligent use of all available information — including past performance compared to past estimates. While your estimating system does require consistency, that doesn't mean it has to be complicated or time-consuming. In fact, a good procedure simplifies estimating. Too many builders have no consistent procedure at all. In those cases, profitable contracts are won more by luck than by skill.

If you want to produce successful (and profitable) bids, you need the relevant facts and a way to put them together so they make sense. Estimated wage rates and current material prices are important, of course. But they're not nearly enough. You also need the cost records from completed jobs. With good job cost records, you can see very quickly your costs on various types of work. You can analyze the actual costs from past jobs and see where estimates varied from actual costs.

The estimate should be detailed enough to provide the information you need to compare to actual expenditures later. One value of a detailed breakdown is that the estimate serves to monitor actual expenses and compare them to the estimate. So estimates can be used the same way forecasts and budgets are used: to regulate and monitor expenditures of job costs, both present and future. In bidding new jobs, as you see specific items going over what they were in past estimates, you can investigate. If the increase is caused by something you can control, that makes all the difference between profit and loss.

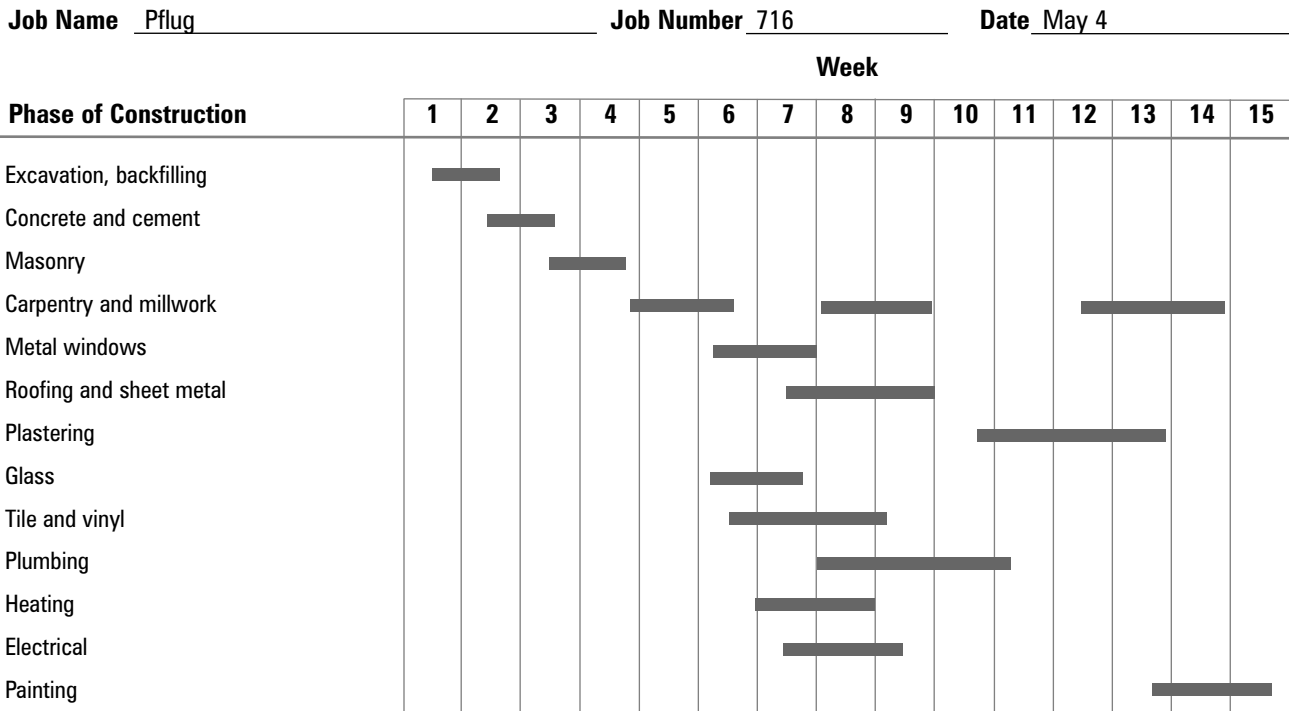
Job Completion Schedule

Figure 19-1
Typical job completion schedule

No accounting system in the world is a substitute for an intimate knowledge of your own business. But your accounting records are valuable in estimating for two reasons:

- 1) They're a source of information and guidance in preparing current estimates
- 2) They're an aid to organizing bids so that none of the parts are left out. Builders who win bids because they forget to include costs for some part of the job can't expect to prosper.

Job Completion Schedules

The first part of every estimate should be a proposed schedule of job completion. It's the framework for your estimate, which you'll fill in with detailed information and support for your material, labor and overhead costs.

The schedule is in itself an estimate, because no one knows for sure exactly how long a job will take. There are too many uncontrollable variables to pin down an exact completion date. But your cost estimate must be based on a rough estimate of how long the work will take.

Once you determine a fair completion time, arrange the phases of the job into a flexible schedule that allows for favorable and unfavorable time variances. This should give you both earliest and latest completion dates. Early completion will often result in higher profits because overhead is allocated at least partly on the length of time required for completion.

Figure 19-1 is a sample job completion schedule. With a plan like this, you can forecast the cash flow, commitments to subcontractors, assignment of labor (not just for this job, but for all jobs), and purchase of materials. Since many factors are beyond your control, make sure your schedule allows for reasonable variations in each phase.

Some phases of a job overlap one another. Extending the beginning and ending date for each phase of a job may give you a clearer and more realistic schedule. The plan illustrated in Figure 19-1 is designed to be flexible. Notice that the later phases are longer than the earlier phases. The builder doesn't really expect that plastering will take three weeks to complete. But the three-week bar indicates the period during which plastering must be completed. It's easier to judge the start and finish time for the initial phases of a job. But as time goes on more variables enter the picture. So the builder has extended the time for later phases to allow for complications in the job schedule.

If all goes well, this job could be completed in twelve weeks. If the job is right on schedule at the end of the ninth week, most of the work will be finished already. If there are delays, the completion schedule must be stretched out. The generous completion schedules for plastering and painting allow for those delays.

A schedule like this will help you deliver the profits you expect, and cuts costs. Your schedule will be more realistic if you review completion times for similar jobs to see where delays have most often occurred. Careful planning will allow for similar delays that are beyond your control.

■ The Estimate

Once you develop a job schedule based on the specs, plans and your familiarity with building requirements, you can begin to estimate the costs. A consistent, well-organized approach is the most likely to succeed. As you make your estimate, remember that the document you're preparing will be used beyond the bidding phase. Many builders just view the estimate as the bait to reel in a contract. But a well-prepared estimate also serves as a control over the job once it's in progress. Comparing estimated to actual costs shows the trend of the project. If costs begin to exceed estimates, you have to work to bring them back in line to preserve your estimated profit.

It's a good idea to have both field and office personnel analyze new jobs. Then get regular status reports from your superintendents. You can watch direct costs from the office — but actual progress occurs at the job site.

The estimate for each part of the job is made up of various components. These may include:

- Materials
- Labor
- Subcontracts
- Equipment use/rental
- Other selling expenses (in detail)
- Fixed overhead
- Profit

Materials

The builder who starts with an accurate material take-off and complete job costs from all previous work should have no trouble estimating true material cost. Start by preparing a complete list of materials for each phase of construction. This list documents your material estimate.

Don't assume that there will be material losses that require a reserve contingency. Any real losses will be covered by insurance. It's true that building contingencies into your estimate creates a safety cushion — but it also makes it harder to estimate true cost. Too often, builders guess at material costs, assuming that they may have left something out. You should include a contingency to cover unknown conditions, not estimating errors. Add contingency at the end of your estimate just before you add in the profit. Don't clutter your estimate with little guesses that allow for errors. This will help you keep your cost figures clean and precise and make them most useful when you use them later as cost reference data.

Labor

Some workers are faster than others, perform better quality work, and make fewer mistakes. Some have a better attitude about their work than others. You should know what subs or crews you'll use when you make your estimate. Many builders who've worked on their own jobs make the mistake of estimating labor based on their own experiences. "I could do that work in 14 hours," you might say. But would it be reasonable to estimate 14 hours for the same work to be done by others? Don't count on it. Instead, rely on educated guesses and calculated averages to estimate your labor costs. Some workers could do the work in 14 hours, others would take 18. A mixed crew might be able to finish the job in a different amount of time. You need to estimate a fair time requirement based on an appraisal of your own work force. This makes labor the single most difficult part of your costs and expenses to estimate.

The hourly wage you pay for labor isn't your hourly cost per worker, of course. You must also include payroll taxes, insurance, and employer-paid union benefits:

Labor, \$20.00 per hour	\$20.00
Liability insurance (2.5%)	.50
Social security (FICA) (7.65%)	1.53
Unemployment insurance (4%)	.80
Unemployment insurance (federal) (.8%)	.16
Union benefits (pension, vacation, etc.) (10%)	2.00
Workers' compensation insurance (5 to 15%)	2.00

This works out to \$26.99 per hour, not simply the base rate of \$20.00 per hour. These percentages are approximate, but taxes, insurance and benefits will add about one-third to your cost.

Review your recent payroll analysis records to estimate the hours required to do each phase of the work. Estimate the hours required in the greatest detail possible. The more detailed your analysis, the more accurate your direct labor estimate is likely to be.

Subcontracts

Builders often run into cash flow problems because they don't anticipate payments to subcontractors. It's especially important to match the payments you'll receive against payments due your subs. You can't anticipate payments to subs unless you follow progress of the work. In a small organization, this isn't a problem. But larger projects require weekly progress reports. These weekly reports serve many purposes, and one of these is helping you forecast when subcontract payments will be due.

Sometimes small operations have to decide between subbing out a specific part of a job or doing the work "house." Often, when you make the estimate, you don't know what you'll decide to do. It depends on how the rest of the job is progressing, how much other work you have to do at the time, and other variables. If you do the work yourself, your profit is greater, so always have that in mind. However, it may not always be practical.

If you're not sure, prepare your estimate as though you'll be using a sub for each part of the job that you might possibly sub out. Then, if you decide later to do the work yourself, that's more profit for you. It's better for you to overestimate, than to not plan on subs and end up short. Your payments to others, which include their job markup, will be reduced if you do the work, and you'll have more control over your cash flow.

Equipment Costs

If you maintain good equipment cost records and know the capability of each piece of equipment, you'll have no trouble estimating equipment costs. Set up a procedure to compute the hourly cost of equipment and keep that cost current. You need to know what your equipment costs to operate, whether the equipment is owned or leased.

Control equipment cost with good scheduling to minimize idle time. A realistic estimate of productivity should be based on your own experience on previous jobs. The hourly cost estimated for equipment should allow for idle time, repairs and maintenance.

Other Expenses

Some of your other expenses aren't direct costs, but they're usually a percentage of direct costs. You can estimate them fairly precisely. Freight and selling expense, for example, will be a certain percentage of direct labor cost. If your estimate of the direct labor cost is accurate, your estimate of indirect costs should be just as good.

Allocating Fixed Overhead

Overhead costs must be allocated to each estimate you prepare. As discussed previously, the allocation of overhead is never precisely accurate. It's not a good idea to assign overhead expense based on the total price in your estimate, because jobs can produce widely differing yields. Many builders add some fixed percentage to the estimate to cover overhead. But this ignores the fact that some jobs require a heavy commitment of your assets and labor while others are largely subcontracted and involve a much smaller commitment. A heavy mark-up on a largely subcontracted job is likely to give the work to your competitors. To get your share of jobs like that, you'll have to add on a much lower overhead burden.

The best way to allocate overhead is on the basis of total labor hours. This is true even though there's no perfect way to allocate fixed overhead. No matter how it's analyzed, overhead expense bears no exact relationship to an individual contract except that it's a very real part of your cost of doing business.

Most fixed overhead expenses vary with the cost of labor, either as a result of labor-related factors, or for the same reasons that labor varies. Most important, direct labor can be identified easily by job. This

gives you an easily-defined base from which to assign fixed overhead.

To allocate fixed overhead by direct labor hours, first use your estimate of the duration of the project. Next, figure what your annual overhead expense will be. You should be fairly certain about how many direct worker-hours the job requires. You should also know your annual fixed overhead. The next step requires an approximation.

Estimate how many direct worker-hours will be spent on all your projects during the next 12 months. Divide this figure by 12 to find the average monthly direct cost for your crews. If the job in question will require 20 percent of your total direct worker-hours, it should carry 20 percent of your fixed overhead for the time it takes to finish the job.

Fixed overhead expenses are more easily estimated than any other cost you have. In most cases, you can project the past year's costs ahead one year fairly easily. While overhead is "fixed," it can increase due to raised rents, inflated prices of supplies, higher telephone bills, and so forth. Consider expected increases in these costs.

If you expect a contract to run for twelve months, allocate a portion of the next twelve months' projected fixed overhead expenses. But a contract that will run about four months should be allocated its share of the average fixed overhead for a period beginning four months before the start and ending four months after completion. This should prevent overloading fixed overhead on one or two jobs during a low-volume period. Adjust the overhead to the duration of short jobs, using a month before and after for a four-week job, three months before and after for a three-month job, and so forth.

Estimating total labor hours a year in advance can be difficult because you don't know for sure what your business volume will be. You can't base your estimate on past performance because the total commitments in the next year probably won't be the same as those for the past year. Still, your volume for the past year is usually the best starting point for an estimate of the coming year.

Estimate labor for the period of the contract on the assumption that you'll win the job you're bidding. Then restate this total on an annual basis. To compute labor for a four-month period, annualize the total by multiplying it by three. For an 18-month contract, annualize the figure by multiplying total labor hours by 67 percent. In other words, express total labor hours as though for a one-year period. If

you're estimating that a job will take 15 months to complete (as in Figure 19-1), annualize total labor hours with this formula:

$$\text{Annualized Labor} = \text{Total labor} \div \text{Months to complete} \times 12$$

For example, let's take a job that will take 15 months to complete:

$$\begin{aligned} \text{Total labor} \div 15 &= \text{Average per month} \\ \text{Average per month} \times 12 &= \text{Annualized labor} \end{aligned}$$

Once you've estimated annual labor hours for one contract, you should have no difficulty calculating what your labor hours will be over a shorter term. Consider the contracts in progress, normal changes in activity to be expected during certain seasons of the year, and assume that you'll win this new contract. Your estimate should be fairly accurate unless something unusual happens during the coming year.

Once you've annualized labor on the contract you're bidding, you're ready to compute a fair allocation of fixed overhead:

- 1) Calculate this job's percentage of total annual labor by dividing the job's annualized labor cost by the company's total annual labor cost:

$$\frac{\text{Annualized labor}}{\text{Company's total annual labor}} = \text{This contract's percentage of total labor}$$

- 2) Multiply this job's percentage of total by the annual overhead to calculate this job's share of annual overhead:

$$\begin{array}{l} \text{Percentage of total} \\ \times \text{Total annual overhead} \end{array} = \text{This job's share of annual overhead}$$

- 3) Find the monthly average for this job by dividing by 12:

$$\frac{\text{This job's share of overhead}}{12} = \text{Monthly average overhead for this job}$$

- 4) Overhead for the total contract is the monthly average multiplied by the number of months for the job:

$$\text{Monthly average} \times 15 = \text{This job's total overhead}$$

Final Estimate

Job Name _____			Company Number _____			Date _____		
Description	Quantity	Unit	Labor unit	Total	Material unit	Total	Subs	Total
General Conditions								
Foremen	7	wks.	\$400.00	2,800				\$2,800
Permits				700				700
Temp. Bldg.						1,200		1,200
Washing							900	900
Rentals	3	mos.			3,000	9,000		9,000
Total				3,500		10,200	900	\$14,600
Carpentry								
Materials								
Finish floors								
Shelving								
Roof nailer								

Figure 19-2
Typical final estimate

You now have a formula to calculate the number for each estimate. If you win this job, compare your actual allocated overhead to the estimate. That will help you track your estimated profit on the job.

Your Estimate Summary

Support all totals in your estimate summary with detailed calculations and lists. This lets you identify cost changes as the job progresses. And it gives you a checklist of problem areas to flag for special treatment when you estimate similar jobs. Figure 19-2 shows a sample final estimate that shows enough detail so you can identify specific costs by job phase.

Using the methods described in this chapter should require no more time than preparing estimates with other methods. But the method described here should improve your batting average. This is especially true if you do the following:

- Use past performance to temper present estimates
- Schedule the completion of each phase and of the total job
- Document each part of the estimate
- Control job costs on a regular basis
- Avoid adding contingencies without good cause
- Establish a methodical procedure for estimating

■ The Next Step — Controlling Costs

Controlling costs begins when the estimate is complete. Once the job is awarded, you must produce the expected profit by controlling the costs projected

in the estimate. Your estimate may be the best-prepared of all submitted, and the best documented. But if you fail to control costs once the job starts, the estimate will be meaningless and the profits nonexistent.

A well-documented estimate makes control easier because each individual phase of the job has been assigned a budget. You control costs within each

phase of construction. This tightens control. When an estimate isn't prepared by job phase, overruns are often hidden until all costs have been tabulated. This rarely works to the builder's advantage. Cost overruns should be stopped as they begin to occur. Looking back at a problem doesn't solve it. Successful builders control their costs during each phase of the work.

Test Questions:

1. The estimate can be thought of as:

- A. A type of budget for a specific job, by which you can measure and monitor results.
- B. A schedule with goals in the form of dollar amounts, providing you both a financial and time guideline.
- C. A tool with which you can anticipate upcoming problems, and troubleshoot them before they turn into cost overruns.
- D. All of the above.

2. Estimates can be made more accurate with the use of:

- A. A computer program, allowing you to do less of the detail work yourself.
- B. Records from previous estimates, both the successful ones and the ones on which you had cost overruns.
- C. A full-time estimator on staff.
- D. A well-designed pegboard system.

3. When estimating payroll costs, you should include:

- A. A cushion, in case you end up needing more people working for more hours.
- B. An allowance for hourly pay increases, especially if the job will run more than six months.
- C. Gross pay plus all benefits and taxes you will have to pay.
- D. Only the net amount you actually have to pay out to crews after deducting taxes and benefits.

4. A good way to allow for equipment costs, in estimates involving the use of capital assets, is:

- A. Estimate the time you think each type of equipment has to be used, and multiply that by the hourly equipment cost.
- B. Simply figure how long the project will take, and use the amount of your total monthly payments during that period.
- C. Add up all bills for maintenance, repairs, and insurance, and include a percentage with each job using that equipment.
- D. Lease equipment for each job rather than tying up your capital, and bill it directly to the customer.

5. You should allocate fixed overhead to each job by:

- A. A set percentage in all cases, no matter how much your overhead actually rises or falls.
- B. A percentage of direct labor, based on overall labor and the labor for each job.
- C. A percentage of sales or cash receipts, minus retainage.
- D. A percentage of gross profit estimated by job, which also enables you to allocate all of your overhead by job without fail.

6. Fixed overhead is:

- A. Easier to allocate, because it can be identified by the job more readily.
- B. Easier to estimate because the amount doesn't vary significantly, but it's less applicable to each job.
- C. Easy to estimate and to allocate, and thus the simplest part of your estimate.
- D. Very difficult to estimate or to allocate, and thus the most troublesome aspect of estimating.

7. When allocating labor to a job, be sure to allow for the number of months the project should take, because:

- A. The shorter the project, the higher your profits will be with a standard allocation formula.
- B. The longer the project, the higher your profits will be with a standard allocation formula.
- C. You need to allocate the correct monthly amount, times the number of months; otherwise, you may allocate too much or too little to each job.
- D. Some months absorb more overhead than others, so you want to err on the high side; use only high-volume months in your estimate.

8. Annualized direct labor costs are helpful in allocating overhead because:

- A. You want to reflect as accurately as possible the allocation for labor, and direct labor is the most reliable method to use.
- B. Although the formula is complicated, your accountant will insist on some form of verification.
- C. Most jobs take about one year, so annualized labor is a reliable shortcut method for allocating expenses.
- D. It always comes out a little higher this way, so it provides you an extra cushion against unanticipated overruns.

9. You should provide complete documentation of all estimate calculations so that:

- A. You can find the causes of problems in future estimates based on the same information.
- B. You will be able to explain exactly how you arrived at a cost calculation, in case the customer requests a change order during the job.
- C. It provides a good working model to continue improving your estimating technique.
- D. All of the above.

10. The best time to control costs is:

- A. Immediately following a monthly project review meeting, when any cost overruns for the past month are explained fully.
- B. As the job progresses, based on a comparison between the estimate and actual costs and expenses.
- C. Whenever your foreman brings problems to your attention.
- D. At the time you approve invoices and statements for payment.

11. The estimate can be used as:

- A. A substitute for more complicated general ledger records.
- B. A type of journal for recording source documents.
- C. A means for monitoring, just like a forecast and budget for each job.
- D. All of the above.

12. When you haven't decided whether you might sub out part of a job or do it yourself, you should:

- A. Estimate total costs on the job above the usual level.
- B. Estimate total costs on the job below the usual level.
- C. Add five percent across the board.
- D. Prepare the estimate on the assumption that you'll sub out the work.

13. The job completion schedule is:

- A. Essential for controlling all phases of the job.
- B. A document that may reveal omissions in your estimate.
- C. A computer-generated form used by accountants to track job costs.
- D. Provided by your local building department.

14. Materials to be used on the job are:

- A. Not included in the estimate if they come out of inventory.
- B. More accurately accounted for with solid, well-documented expense allocations.
- C. Impossible to estimate accurately because costs change constantly.
- D. Accurately estimated with the use of take-off records from previous jobs.

15. Control over job costs occurs:

- A. Historically, with the value of hindsight.
- B. At each phase of the job, tightening your controls.
- C. Only at key points in the progress of the job.
- D. Only when subcontractors are involved.



Financial Statements

Recording Before the Event

Financial Statements

Using Financial Information

Financial Ratios

Putting Together a Statement

Comparative Period Statements

Restatements by Accounting Methods

Statements by Job

Statements for Loan Applications

Recording Before the Event

Accrual and deferral entries record real events — exchanges of money that have not yet taken place or that occurred previously and are being spread over time for accounting purposes. Recording before the event is a way of equalizing timing differences between work you do and payment you expect to receive later. It also equalizes differences in timing between lump-sum prepayments you make in one month and the resulting services or benefits you will receive over many months to come for that single payment. Accruals and deferrals give you a truer picture of your business than if you base your accounting only on cash transactions as they occur.

No matter what the size of your contracts, completed-contract accounting procedures require that all business be deferred. Percentage-of-completion contracts are accrued or deferred in part whenever billings don't match receivables. And accounts receivable, or income booked and not yet received in cash, is often a significant part of total assets — and certainly the largest current asset.

You record accruals other than for contracts to show accounts and taxes payable, prepaid assets, and any other non-cash exchanges that you expect will result in cash changing hands in the future. Your accruals should reflect the true financial condition of your business, regardless of the timing of cash exchanges. Don't misuse accruals by creating on paper the payment results you *hope* will occur.

A distinction should be made between journal entries and accruals. While accruals are always made by journal entry, not all journal entries are accruals. Below are some examples of non-accrual journal entries:

- Entries to correct coding errors
- Entries to record automatic loan payments
- Entries to record interest or payroll taxes paid
- Depreciation and amortization entries

Job Name	Complete %	Income		Costs		Total Earned/Accrued	
		Amount	%	Amount	%	Income	Costs
Green	22%	\$218,500	20%	\$115,423	19%	\$1,092,500	\$601,500
Jones	18%	\$ 63,900	15%	\$ 52,347	20%	\$426,000	\$255,600
Smith	45%	\$308,000	50%	\$179,364	49%	\$616,000	\$368,000

Figure 20-1
On-going jobs — percentage of completion method

This chapter explains how accruals and deferrals are recorded and how they fit into a builder's operation. This and the following chapter, which discusses the individual accounts and their meaning, should help you read and construct a financial statement and make these special accounts work for you.

Percentage-of-Completion Adjustments

A major form of accrual takes place when you use the percentage-of-completion method of accounting. When you prepare a financial statement with this method, or prepare for income tax reporting, a series of entries must be made in the form of accruals. The purpose is to reflect all sales and costs in your books based on the percentage each job has been completed, regardless of the amounts you've been paid (sales) or you've paid out (costs).

There are roughly four types of accruals you're likely to make using this accounting method. They can be defined by type of entry. You'll need to:

- 1) Report income not yet paid but reported under this method.
- 2) Defer income received but not yet reported.
- 3) Accrue costs applicable to currently reported income levels.
- 4) Defer costs paid for but not yet reported.

If this is confusing, just remember the purpose is to reveal the precise income and costs based on a percentage of job completion in your financial and tax reports. If a particular job is 25 percent complete, and you've received only 20 percent of the income, you need to accrue the 5 percent difference. And if you've completed a job 25 percent but been paid 28 percent of your costs, then you need to defer the 3 percent difference.

Here's an example to help you understand these entries:

It's near the end of the quarter and your accountant wants to estimate your tax liability so he can prepare a tax prepayment. You have three on-going jobs accounted for under the percentage-of-completion method. Figure 20-1 shows the information for your accountant.

Job Name	Income		Cost	
	Accrual	Deferral	Accrual	Deferral
Green	\$21,850		\$18,045	
Jones	\$12,780			\$ 5,112
Smith		\$30,800		\$14,720

Figure 20-2
Summary of on-going jobs

The actual income and cost results need to be adjusted so they agree with the current percentage complete. By comparing actual income received and costs paid (columns 3 and 4) with the total income and costs for each job (column 5), the percentages are easily calculated and the task is made easier. Figure 20-2 shows a summary of the information.

The journal entries to accrue and defer these amounts are:

	Debit	Credit
Accrued Income (Asset Account)	\$21,850	
Income (Green Job)		\$21,850
Accrued Income (Asset Account)	12,780	
Income (Jones Job)		12,780
Income (Smith Job)	30,800	
Deferred Income (Liability Account)		30,800
Cost Accounts (Green Job)	18,045	
Accrued Direct Costs (Liability Account)		18,045
Deferred Costs (Asset Account)	5,112	
Cost Accounts (Jones Job)		5,112
Deferred Costs (Asset Account)	14,720	
Cost Accounts (Smith Job)		14,720

These adjustments alter the reported sales and direct costs to conform to the percentage-of-completion for each job. The offsetting entries are classified on the balance sheet under asset and liability categories even though, in the strict sense, they're not assets or liabilities. They're adjustments to the income statement that require offsetting entries, and the balance sheet is a handy place to put them. By adding up the net of entries on the balance sheet, you can quickly tell how much net accrual or deferral you're carrying at any given point.

For completed contract accounting, accruals are also entered into your books at the point of preparation of financial statements or at the end of the year. The task is much easier, however. Because completed contract accounts are reported only when the jobs are completed, all income received and all costs paid are removed from your financial statements, and aren't reported until the year of completion.

Accounts Receivable

All sales on account should be accrued because no cash changes hands. Make an entry to receivables instead of to cash when you make sales on account. When sales on account are paid, make a cash entry to reverse the accrual you made earlier to receivables.

Your accrual entries should always record events in the period in which they occur. Your reversal should always be recorded in the period in which cash actually changes hands. Record the total accounts receivable for each month in a single entry as a portion of the sales journal totals. If this entry could be isolated from sales, it would look like this:

	Debit	Credit
Accounts Receivable (asset)	xxx	
Sales (income)		xxx

When customers pay their accounts, their portion of accounts receivable in the monthly sales totals should be reversed.

	Debit	Credit
Cash (asset)	xxx	
Accounts Receivable (asset)		xxx

The net effect of these two entries is to cancel the accounts receivable. Since the original charge is reversed in a later month, the remaining two entries in your general ledger will reflect this inflow in cash:

	Debit	Credit
Cash (asset)	xxx	
Sales (income)		xxx

This entry is identical to the one made for cash sales. The accrual system and the accumulation clearing account, Accounts Receivable, adjust income timing differences. To wait until you receive cash before you record the income would distort the true business picture of your operation, since you probably do most of your work on account.

Prepaid Expenses

You don't usually pay all your expenses in the current month; you accrue them for payment in later months. And some of the expenses you do pay apply to more than a single month's service. You may pay three year's insurance coverage in advance, for instance, in the first month of the policy period. It would not be accurate to record the entire 36 months' expense in the first month. The entire amount should be classified as a prepaid asset and assigned to an expense account. Then month by month the asset

should be removed from your general ledger in equal installments over the period of the policy. The monthly portion of the insurance asset is *reversed*, since the whole asset was entered in the first month.

You can do this for any expense that applies for longer than one month. But it's not practical to set up and amortize expenses for only a few months. Reserve this procedure for expenses that:

- 1) Apply over twelve months or more, or
- 2) Apply for less than twelve months but belong partly in the following tax year.

For example, if you pay six months' insurance coverage in the eleventh month of a tax year, it would be proper for you to set up four months' payments as a prepaid asset. This would recognize two months' coverage this year (for the eleventh and twelfth months), and four months' coverage next year.

Several types of expenses are commonly accounted for as prepaid assets. These are insurance, printing expenses, office supplies, interest, and contract services.

Office Supplies

Consider office supplies and bulk printing purchases as part of inventory. They are used over time and replaced as needed, just like items in your yard. The difficulty in accounting for these expenses is that you must estimate the length of time you will have these supplies on hand and thus the number of months' prepaid asset you need. Unlike insurance policies, which cover defined periods, office supplies and printed stationery last for an indefinite period. You must make a fair estimate of the "life" of these expenses before you establish a prepaid asset for them. Base your estimate on the prepaid asset's expected use — the average monthly consumption, the budgeted months of supply or the like.

Loan Interest

There are two ways to record interest paid on bank loans. Since the interest applies over the period of the loan itself, you can recognize that amount over the same period. Banks sometimes supply a scaled interest summary sheet showing how much of each payment applies to interest and how much to principal. Use this information when it's available to recognize the exact interest amount per month.

The second method is to recognize equal amounts of interest every month. Under this method a 36-

month loan repayment period would call for recognizing 1/36th of the total interest each month. If you had a loan with 36 equal installments and a balloon payment, you'd record equal interest installments each month, withholding some interest from each portion to be recognized as the balloon payment at the end of the period.

Say you spread the interest equally over the period of loan repayment and recognize these equal portions. There are two methods of booking this interest expense. In the first, you recognize the interest as part of each installment. In the second, you amortize a pre-established prepaid asset total. The first method would begin with an entry to record the loan:

	Debit	Credit
Cash	3,000	
Note Payable (current)		1,000
Note Payable (long-term)		2,000

The drawback of this method is that you make no entry to reflect interest. The monthly entry to record note payments would be included with the check register totals. If the interest entry could be isolated, it would look like this for one month:

	Debit	Credit
Note Payable (long-term)	\$83.33	
Interest Expense	16.67	
Cash		100.00

In the first method, you recognize the interest expense only as each month's installment is paid. You establish a prepaid asset account in the second method. Total interest is recognized as an asset and amortized over the repayment period. The entry to record the loan would be:

	Debit	Credit
Cash	3,000	
Prepaid Interest	600	
Note (current)		1,200
Note (long-term)		2,400

The monthly check-register breakdown, if isolated, would show note payments as follows:

	Debit	Credit
Note (long-term)	100.00	
Cash		100.00

The monthly journal entry to *reverse* the monthly portion of the prepaid interest and *record* the interest as an expense would be:

	Debit	Credit
Interest Expense	16.67	
Prepaid Asset		16.67

The method you use to record interest for prepaid assets is up to you. Your method should reflect the total prepaid interest as an asset, allowing you full reporting on financial statements. Documentation in the original note entry should provide a trace of the loan's history.

Contract Services

Contract services such as legal fees, engineering, or special business consulting can apply to future periods as well as current ones. These future expenses

should be spread over the whole period to which the services will apply. You may have to estimate this period. Then amortize the expenses over the life you've estimated.

Some types of expenses require special treatment involving both deferral and accrual. Figure 20-3 shows a twelve-month schedule for property tax expenses, payable in December and April and applying to the period of July 1 through June 30. Since Johnson Construction reports on a calendar year, it wants to report one half of the expense in each period. But to show December and April as the only periods of taxation would distort the financial picture through November of the first year, for the first quarter of the second year, and for May and June. The company wants to show \$150 expense in each of the twelve months. From July through November, Johnson makes this entry each month:

	Debit	Credit
Property Tax Expense	150	
Deferred Expense (liability)		150

Accrual Schedule Property Tax Expense

Month of entry	Payments	Monthly Expense	Accumulated Expense	Balance of:	
				Prepaid Asset	Deferred Liability
July	\$	\$150	\$150	\$	\$150
August		150	300		300
September		150	450		450
October		150	600		600
November		150	750		750
December	900	150	900		-0-
January		150	150		150
February		150	300		300
March		150	450		450
April	900	150	600	300	-0-
May		150	750	150	
June		150	900	-0-	
Total	\$1,800	\$1,800	*		

*Expense is split between the two years - \$900 in each six-month period.

Figure 20-3
Typical accrual schedule

Johnson's December's entry, when the tax is finally paid, is as follows:

	Debit	Credit
Property Tax Expense	150	
Deferred Expenses		750
Cash		900

The entry for the first three months of the second year is the same as the previous year's entry in the deferral journal. In April, Johnson pays the entire second installment and makes this entry:

	Debit	Credit
Property Tax Expense	150	
Prepaid Asset	300	
Deferred Expenses		450

Johnson thus recognizes taxes paid in advance as being prepaid. The payment of the expense is not applicable until later. The entries for May and June are:

	Debit	Credit
Property Tax Expense	150	
Prepaid Asset		150

At the end of the period in June the prepaid asset account and the deferred liability account are both zero, and Johnson has reflected the property taxes as \$150 each month. Johnson could use this procedure for contract services that apply to a period both before and after the actual date.

Prepaid Expenses and Depreciation

Amortizing an expense over a period of time is not at all the same thing as depreciation, although the two seem similar at first glance. *Depreciation* is the recognition of the cost of new and permanent fixed assets over the useful life of those assets. These are generally large-cost purchases that have tangible value to the builder and often last beyond the depreciation period.

Amortizing expenses over a period of months or years does not indicate that there is a tangible value. You are not recognizing a cost over a useful life. Rather by prepaying and amortizing an expense you spread the expense over a period of time. You do this so that you don't misrepresent the true financial condition of your business for the month in which you prepay.

Deferred Assets

You can treat expenses by paying them and deferring them in your books until a later time. Unlike prepaid asset accounts which recognize expenses by amortizing them over time, deferred asset accounts are set up for payments you make now that will be recognized at a later date.

There is an important distinction between deferred liabilities and deferred assets. Figure 20-3 illustrated how to treat expenses by setting up a liability or a payable account for expenses booked and not yet paid. On the other hand, deferred assets are those items that you pay first and then code to the asset account to be deferred later. Suppose you pay for having letterhead and envelopes printed with your new business address, but the actual move isn't scheduled for another three months. The proper treatment of this expense would be to establish a deferred asset account and record the entry as follows:

	Debit	Credit
Deferred Assets	xxx	
Cash		xxx

Once the move is completed and you begin using your new stationery, remove the expense from the deferred asset account and do one of two things, according to the expected life of the stationery:

- 1) Write the amount directly to expense
- 2) Set up the amount as a prepaid asset and amortize it

You can also defer assets such as deposits you make against future expenses. For example, you could make a deferred deposit for a convention you'll be attending in six months. Or you can defer your last month's rent prepayment if you lease rather than own your property. Be sure to distinguish between security deposit payments and payments for the last month's rent. A security deposit is refundable, and should be placed in an asset account. The last month's rent is a true future expense and is deferred until the lease expires.

Defer expenses that refer to future sources of income. A builder might pay for permits and licenses for a job this month knowing that the income from the contract will not be generated until next year. Such items are deferred assets. Be sure to account for expenses at the same time you recognize the corresponding income.

Provision Accounts

Occasionally you must establish some provision for expected future losses. This is especially true when a comparison of actual and estimated costs on a job shows that a net loss will result. The loss may have a significant impact on operations when it occurs, and it should be spread over the life of the contract.

A bad debt reserve is a good example of a provision for future losses. Record a monthly expense in the general ledger by setting up a provision against the accounts receivable asset. Offsetting entries show a monthly bad debt expense, even if no bad debts are recognized that month. You record actual losses against the provision you have set up.

Establish a provision against your assets — either receivables or deferrals — any time you know of a future loss. In some cases, such as losses in contract agreements, establish a liability account for future losses.

Set up provision accounts with caution. Habitual use of a provision procedure can distort the true state of your business as shown by your financial reports. Allow provisions only for certain losses. Estimates of expected future losses must be made using highly accurate assumptions. Base your estimates on solid current data. Use your past records for comparison if you're sure of their accuracy and similarity to the current situation.

Identify specifically what your provision will cover when you set it up. You might want a provision for increased bad debts when business volume increases, or for early overruns on contracts. These are supporting reasons for setting up provisions. But never establish provision accounts as contingencies against the mere possibility of future unexpected losses.

Controls

Each time you accrue an expense or establish a provision, set up a corresponding subsidiary control account. These sub-accounts control the flow of accrual entries. This keeps the general ledger a summary report as it should be. At the same time these control accounts document the reasons for the special accrual or provision treatment.

Know at any time exactly what items are in the Prepaid Assets, Deferred Assets, Deferred Liabilities, and Provision for Future Losses accounts.

Here are some examples:

Prepaid Assets

Insurance premiums for coverage in the future

Deferred Assets

Deposits against future expenses

Deferred Liabilities

Prepayment on future contract

Provision Account

Reserve for bad debt loss

The accounts payable and receivable controls were discussed in previous chapters. The general ledger should contain an entry to show the monthly flow of taxes payable, especially payroll taxes. Consider these accounts as strictly clearing accounts.

Any special journals you use to record and reverse accruals should contain full explanations of the entries. Keep reversing and recording journals separate. When you reverse a previous entry, make your explanation refer to the original entry you're backing out. This lets you maintain control over your accounts, yet reflect the true status of your business when you prepare your current financial statements.

The Cash Accounting Method

Builders commonly keep their books on the accrual method because of the nature of the construction business. This requires that financial statements reflect events in the period of activity, not simply when cash changes hands.

The other method of accounting is called the "cash method." In this method, as we have seen in earlier chapters, you only record exchanges of cash and financial statements show only cash exchanges. You can use this method for income tax returns, but only if you do so every year. The cash method accounting is much simpler, as you don't have to keep records for contract progress, accounts receivable, or accounts payable.

But accrual records give you more accurate financial reporting and therefore better control over your business. These controls minimize cost and expense, improve efficiency, and result in healthy cash flow and profits. Without controls, your chances of staying in business are cut considerably. The cash accounting method never reflects the true status of your business. While accrual methods present their own special problems, cash accounting is a poor alternative if you want to improve the quality of your financial reports and controls.

Test Questions:

1. An accrual in your books is:

- A. Simply the balance in any liability account.
- B. An entry made to balance your actual records to the budget and forecast.
- C. An entry for income earned but not yet received, or for an expense incurred but not yet paid.
- D. Any journal entry.

2. Accruals have to be made because:

- A. Income and expenses don't always cause a cash transaction in the correct period.
- B. Jobs rarely get completed on schedule.
- C. It is the only way to bill customers in a timely manner.
- D. All of the above.

3. An entry to record an accrual for sales made on account consists of:

- A. A debit to cash and a credit to sales.
- B. A debit to sales and a credit to cash.
- C. A debit to accounts receivable and a credit to sales.
- D. A debit to sales and a credit to accounts receivable.

4. When a customer pays an account on credit from a previous period, the entry involves:

- A. A debit to accounts receivable and a credit to sales.
- B. A debit to sales and a credit to cash.
- C. A debit to cash and a credit to sales.
- D. A debit to cash and a credit to accounts receivable.

5. Prepaid expenses are:

- A. Accruals made to refer some portion of this year's expense to next year, when you don't need the write-off on your taxes.
- B. Payments for expenses that apply over several months, that are set up as assets and then written off over the applicable period.
- C. Holding deposits on materials to be drop shipped to job sites within the coming week.
- D. Payments required from suppliers in advance of accepting orders, when you have a history of late payments.

6. The difference between an accrual and a deferral is:

- A. The accrual is allowed by law, while deferrals are considered as tax avoidance.
- B. The accrual is made before the cash transaction takes place; the deferral delays recognition of income or expense to a later period.
- C. The deferral is made before the cash transaction takes place; the accrual delays recognition of income or expense to a later period.
- D. Only a matter of terminology; they are essentially the same thing.

7. An example of deferred income is:

- A. A customer pays you before you actually earn the income. You set it up as a deferred liability, and recognize it in the future.
- B. A customer owes you money now but does not pay it. So you have to defer receiving payment until the future.
- C. A customer agrees to hire you but, before you sign contracts, decides to use someone else. The income you anticipated is permanently deferred.
- D. You manage to reduce taxable income this year by paying a lot of expenses before December 31. However, next year you will have lower expenses, so you have deferred the taxable income.

8. A bad debt reserve is:

- A. A cash fund you establish in case you experience bad debts next year.
- B. A fund banks set up to cover loan defaults by contractors.
- C. A reserve set up in your books by journal entry to allow for any future bad debts you might experience.
- D. A reserve fund set up in the net worth section of your general ledger, in case any customers overpay you; the reserve is then reduced to book unexpected profits.

9. Any accrual or deferral account has to be carefully controlled because:

- A. They are likely accounts for embezzlers to use to hide unbalanced receivables.
- B. You need to be able to verify everything in case of a tax audit.
- C. Your accountant will want to zero out these accounts at the end of every month.
- D. You will need to identify all required reversal entries in a future period.

10. The cash accounting method:

- A. Is recommended because you can avoid any accrual or deferral entries.
- B. Is not allowed by law, so you cannot use this method for your bookkeeping needs.
- C. Does not enable you to book income and expenses in the proper period, so it presents an unrealistic version of events.
- D. Can not be used for your income tax returns since no accruals or deferrals show up for the entire year.

11. Under the percentage-of-completion method of accounting:

- A. Unearned income is deferred when financial statements are prepared.
- B. Unearned income is accrued and added back into the income statement.
- C. Unearned income is left off until the entire job is finished.
- D. No accruals are required to adjust income.

12. Under the percentage-of-completion method of accounting:

- A. Prepaid costs of sales are accrued.
- B. Prepaid costs of sales are left on the books in all cases.
- C. Prepaid costs of sales are removed until the correct period.
- D. No accruals are required for cost adjustments.

13. Under the completed contract method:

- A. All prepaid and unearned accounts are adjusted based on percentage of completion.
- B. Only sales accounts have to be adjusted based on completion status.
- C. Accruals are made on a month-to-month schedule.
- D. All uncompleted sales received and costs paid are removed from the books at the end of the year, and are not reported until the job is completed.

14. Essentially, accruals and deferrals are intended as adjustments that:

- A. Help reduce taxes by putting taxable income into the following year.
- B. Accountants can use to make your financial status look as good as possible.
- C. Reflect accurately what is going on, even when cash hasn't traded hands yet.
- D. Help make up for accounting errors in your books.

15. To keep your books accurate, all accrual entries:

- A. Should be made only by your accountant.
- B. Have to have at least two supporting documents.
- C. Take place only after cash changes hands.
- D. Have to be reversed at some point in the future.

Financial Statements

Financial statements summarize your operation's activity for a certain period, usually a month, a quarter, a year or more, and show its status at the end of that period. Data for financial statements is taken from the general ledger, but only after the ledger is proven to be in balance on a worksheet called a *trial balance*. The general ledger is an important record, but it is not useful in revealing financial data. It is really no more than a listing of account balances. Financial statements arrange the general ledger accounts in meaningful groups to reveal the financial truth about your operation.

■ The Three Financial Statements

There are three distinct financial statements. Each one serves a specific function:

- 1) The balance sheet
- 2) The income statement
- 3) The statement of cash flows

The Balance Sheet

The balance sheet is a summary of the existing conditions of the business. It's called a balance sheet because its line-by-line details show the balances of general ledger accounts. The balance sheet lists the assets, liabilities, and net worth of a business as of a given date. Assets are the value of the properties owned, liabilities are the company's debts, and net worth is the owner's equity or the net value of the assets less liabilities. The relationship between assets, liabilities, and net worth is shown in this formula:

$$\text{Assets} - \text{Liabilities} = \text{Net worth}$$

The balance sheet is broken down into two parts — assets on the debit side and liabilities and net worth on the credit side. Debit accounts generally represent assets, and credit accounts generally represent either debt or worth. Liabilities here are debt and equity is worth. The balance sheet will always be in balance because:

$$\text{Total assets} = \text{Total liabilities} + \text{Net worth}$$

The Income Statement

The income statement summarizes business operations within a time period. The ending date of that period is always the same as the closing date on the balance sheet. The period covered by an income statement is always specified on top of the report. For example, an income statement for the second quarter would read: "For the quarter ended June 30, 20__."

The income statement is broken down into more or less standard divisions. Except for variations tailored to the needs of specified individuals and businesses, here is the format for a standard income statement.

Gross Sales

less Direct Costs

equals Gross Profit (Income before Operating Expenses)

Gross Profit

less Operating Expenses

equals Income from Operations (Income before Income Taxes)

Income from Operations

less Provision for Income Taxes

equals Net Profit

The income statement allows for flexibility in the way you want income broken down for the period. The details of operations can be shown in summary form in a single column. Income can be compared by month, quarter or year to income in another month, quarter or year. The statement can be broken down by job, redefined by another accounting method, and expressed in dollars or percentages. You need this flexibility because the income statement is usually subjected to closer and more detailed analysis by lenders than are the other two statements.

The Statement of Cash Flows

The statement of cash flows is a summary of the sources of and uses of cash — where it came from and

where it went for the same period covered by the income statement. The statement of cash flows has two sections:

- 1) The fixed or long-term provisions of funds, which includes net income
- 2) The change in current assets and liabilities

The bottom line of this report shows either an increase or a decrease in funds.

The *sources* of funds are generally cash-basis net income, sales of assets, increases in liabilities, and decreases in other assets. The *applications* or uses of funds include the purchase of long-term assets, the decrease of liabilities, and the payment of taxes. Any time you change the sources or applications of your funds you affect your current assets and liabilities.

For example, paying off a bank loan is an application of funds. You use money to decrease the balance of cash. Every source and application of funds has an offsetting effect on the components of the cash flow change — your current assets and liabilities.

The change or the net increase or decrease in funds is expressed in two ways — as a change in the source and application of funds, and by the change in liquid position (current assets and liabilities). Thus a change in your cash flow is a change in both:

- 1) Your current cash position
- 2) The source and application of your funds on long-term assets and liabilities

The statement of cash flows will be in balance if the general ledger and the balance sheet are in balance. Here's how you can check your accounting accuracy. The net increase or decrease in your funds should be equal to:

$$\begin{array}{r} \text{Current Assets less Current Liabilities (End of Period)} \\ \text{less} \\ \text{Current Assets less Current Liabilities (Beginning of Period)} \end{array}$$

In the above formula an increase from the beginning to the end of the period means an increase in funds for the period, and a decrease from the beginning to the end of the period means a decrease in funds.

The Relationship Between Statements

Each of the three statements has a distinct function, and these functions are interrelated. Any one statement by itself can appear promising without

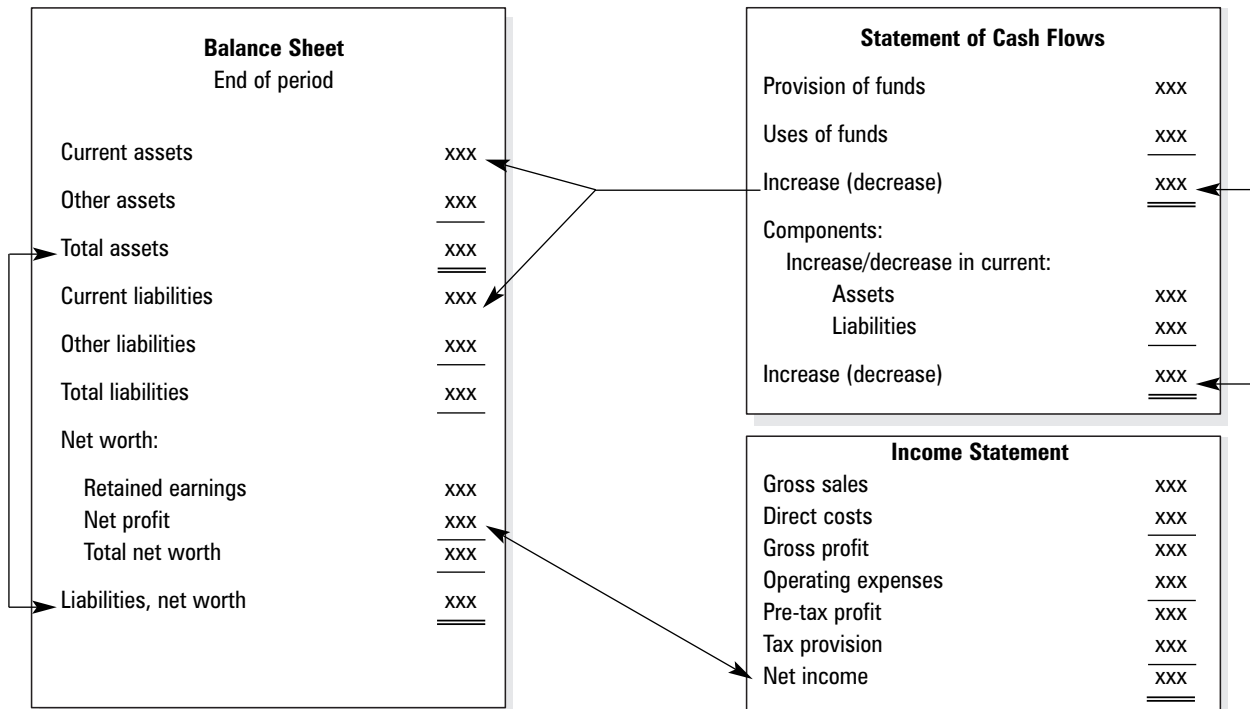


Figure 21-1

Balancing financial statement relationships

revealing the true status of your operations. Combined, they paint a fuller picture.

- 1) The balance sheet is a general indicator of the strength of your operation — how well the business is able to finance its commitments, how heavily financed it is, how weighted its assets are against its liabilities, the degree of debt commitment versus gross value.
- 2) The income statement shows how well you're controlling costs and expenses, the yield on your operations, and the volume of business you're doing. The income statement also divides the information into categories that indicate where you are having problems.
- 3) The statement of cash flows tells you whether your operation is handling cash properly. A study of this and the other statements points to cash trends and shows how well you can meet your present and future cash requirements.

Always review the three statements together. While a balance sheet could present a healthy picture, an income statement could show costs far out of control and yields that are much too small. Or an income statement may show good volume and profits, but the

cash flow may indicate that all the cash is tied up in uncollectible accounts.

Comparing an income statement and a statement of cash flows might also show that a seemingly profitable business has overbought fixed assets, thereby seriously draining its capital resources. On the other hand, a low-profit or loss status on the income statement may look negative alone, but in fact the business may have a better potential for growth and profits because of an excellent cash position shown on its statement of cash flows. Consider the value of this last status when, for example, your slow season is ending and business is about to pick up. You want to be ready to commit your funds in contracts that will produce income down the road. No one report can show you a complete profile of your operation. You or a lender must analyze all three statements together along with your plans for the future, to come to any realistic lending or planning decisions.

The three statements have a descriptive relationship to one another. That is, all three statements describe your business better than any one of them could by itself. But they also have a balancing relationship. Here are the principal balancing relationships of the three statements. See also Figure 21-1.

Trial Balance		
March 31, 20_____		
Current assets	14,860.12	
Fixed assets	188,419.80	
Other assets	9,400.00	
Current liabilities		6,211.40
Long-term assets		37,005.00
Retained earnings		122,400.86
Total	212,679.92	165,617.26
Net profit		47,062.66
Total		212,679.92
Gross sales		477,899.41
Direct costs	231,566.01	
Operating expenses	151,618.60	
Income tax provision	47,652.14	
Total	430,836.75	477,899.41
Net profit	47,062.66	
Total	477,899.41	

Figure 21-2
Summary trial balance

- Change in current assets less change in current liabilities equals net increase or decrease in funds
- Increase or decrease in net worth *equals* income or loss from operations
- On the balance sheet, total assets *equals* total liabilities and net worth.

■ The Trial Balance

After you post your ledger at the close of the period, the first step in preparing financial statements is to put together a *trial balance*. See Figure 21-2. This worksheet proves that the general ledger is in balance. In all cases, debits should equal credits. So the total of all debits on one side of the trial balance must equal the total of all credits on the other side. Otherwise, none of the financial statements will balance.

A trial balance can also show at a glance the distribution of accounts and can thus isolate the profit.

Because some entries are made on the general ledger side (the top section of the trial balance) and others on the profit and loss side (the bottom section), find the profit by adding each side separately in the order the accounts are listed.

The general ledger will balance when all entries into it have been made correctly. The way to prove the general ledger is to add up the totals of the accounts. Modern-day general ledgers are maintained by the double-entry system. This means that every entry is made twice — one debit and one credit. Debits are positive numbers and credits are negative. Because every entry includes a positive (debit) and a negative (credit), a correctly-posted general ledger will add up to a net of zero. For example, to record a payment you debit an expense account and credit cash. To record a charge sale, debit accounts receivable and credit income. Double-entry bookkeeping was discussed in Chapter 1.

Look at the summary trial balance in Figure 21-2. Each section of the general ledger is shown in summary. An actual trial balance would list every account

in detail. Total assets, liabilities and net worth balance when you show the net profit of \$47,062.66. The same amount is needed to balance the profit and loss sides. This proves that the general ledger is in balance.

Closing Adjustments

When you finish the trial balance, proceed to make the closing adjustments. Adjustments are usually entries made only on a worksheet to bring the statement up to date. Make these entries in the general ledger once a year after the books are closed out. But make the adjustments for interim financial statements against the trial balance. Here are some typical adjusting entries:

- 1) Debits to various expense accounts offset by credits to the liability, Accounts Payable, for adjustments to actual year-end payable balances. For example, you might have calculated accounts payable and made entries to accrue those balances, but left off some balances you owe. If statements arrive after your closing date, it will often be necessary to adjust the accrual entry.
- 2) *Adjustments for coding errors in your books.* With any kind of volume in your accounts, it may happen that expenses (or even costs) will be classified into the wrong accounts. This usually occurs with expenses that could be classified in more than one way. For example, the cost of printing business cards could be put into Office Supplies, Printing, or Advertising and Promotion. In addition to deciding where you want that expense to be classified each month, you might need to audit your own accounts and make year-end coding adjustments.
- 3) *Bank reconciliation adjustments.* You may need to enter bank charges, such as check printing or deposit slips, or correct math errors. For example, you may have recorded a payment as \$31.18, when it was actually \$31.81. You need to correct these transpositions that throw off your books and your cash accounts. With the inconvenience of making these adjustments for bank items for prior months, it would be easier if your bank cut off its accounting in the middle of each month. Some banks do, so your adjustments are made in the current month.
- 4) *Write-offs for bad debts.* You need to record the expense and a reduction in Accounts Receivable to record any bad debts. This is especially important at the end of the year, so the expense will be reported in the correct period.
- 5) *Changes in inventory based on year-end physical count.* If you carry a significant amount of inventory, you need periodic physical counts — the most important one at year-end. You need to adjust the current asset account inventory to reflect the actual balance. As a general rule, this account is changed only periodically (only at year-end if you keep inventory levels about the same all year). The adjustment is made not only because the dollar values change, but to account for spoiled and damaged items, theft losses, and other occurrences that may affect the quantity or value.
- 6) *Recording of depreciation and amortization.* It's common to calculate and record depreciation and amortization only at year-end. You or your accountant might estimate quarterly or even monthly depreciation throughout the year, but this non-cash expense can only be calculated accurately by going through the entire process once a year. Given that the depreciation schedule is set way ahead of time, you can set up a worksheet showing your depreciation and amortization expense for this year and future years. Your worksheet will need modifying for any acquired capital assets, and for the sale or replacement of old ones.
- 7) *Adjustments to the Notes Payable liability for the year's interest.* Generally, you make note payments each month and reduce the liability account without allowing for that part of the payment that goes to interest. Then at year-end you calculate the year's interest and make an adjustment. The liability is increased and offset by a debit to the Interest Expense account. This is fine for relatively small interest payments. However, if interest is a large monthly amount in your system, you should calculate it ahead of time and make a monthly assignment of interest expense as part of your payment. Remember, the higher the adjustment at year-end, the less accurate your interim reports were.
- 8) *Corrections to liability and expense accounts for tax liabilities.* You probably need to make some adjustments to payroll liability accounts and other tax liabilities. If you're keeping accurate on-going records, the adjustment should be relatively small. However, with a large volume of payroll, the liability accounts will probably need to be updated at year-end. The adjustment consists of an increase or decrease to the specific tax liability account, offset by an adjustment to the Payroll Tax Expense account.

- 9) *Adjustments to percentage-of-completion report.* If you report under the percentage-of-completion method, you need to adjust your year-end income and cost accounts to reflect updated numbers. For each job reported under this method, the correct income and cost levels should correspond with the percentage that the job has been completed. Invariably, there will be adjustments, but they should be minor. For practical reasons, such entries are made only at year-end or when financial statements are prepared (quarterly, for example). The entry consists of setting up accrued and deferred accounts and adjusting reported income and costs. (See Chapter 20.)
- 10) *Adjustments for completed contract accounting.* Under this method of accounting, a job's income, costs, and profit are reported only in the year the contract is completed. So even a job 95 percent done is not reported in the current year, but deferred until the year of completion. The adjustment in this situation involves removing all income and cost numbers from the books, so they accurately reflect only completed projects.

Supplementary Schedules

The trial balance adjusted for closing entries forms the basis for the financial statements themselves. Financial statements are summaries, so sometimes they require further explanation. The three-page package of financial statements is designed for uniformity and compactness. But a particularly unusual item or high balance requires a supplementary schedule. Most comprehensive statements include explanatory notes and schedules. These brief notes are usually included on the statements themselves. For example, a notation might read:

Accounts Receivable (Note 1)

"Note 1" would provide all the detail necessary to explain the balance of receivables.

Notes on supplementary schedules might explain the accounting basis on which income is recorded in the statements. This is particularly true for builders, whose accounting basis for income is usually more complicated than that for most other businesses. Include notes to explain or elaborate on any item you think should be detailed, such as the various valuation methods used and the ways some accruals have been made.

Balance Sheet Accounts

The balance sheet contains the following account categories in the order they appear on the statement.

Current Assets

Current assets are *liquid assets* — assets available to the builder within one year. This means that they could be turned quickly into cash. The asset accounts include cash, accounts receivable, inventories, and other current assets. Accounts receivable and inventories fall into this category because if they're currently receivable and usable, they generate cash within a year.

This category is especially important when it's compared to current liabilities payable within one year. It's an indicator of the general health of a business. Current assets are the guideline for a builder's immediate and future financial decisions. That's why it's important not to carry delinquent and uncollectible accounts without an adequate bad debt reserve, or to include dead inventory in current assets. Then you couldn't accurately judge your own ability to fund future operations.

Assets like equipment aren't included with current assets because they generally represent a long-term investment. Besides, you can't be certain you could sell your equipment at book value within a year — and you wouldn't normally make decisions based on such a move anyway.

Fixed Assets

This account category includes the gross value of equipment and machinery, small tools, improvements, furniture, fixtures, structures and land, less a reserve for the depreciation that you've expensed for them. These assets are fixed because they aren't available to be turned into cash within one year.

Include an account called Reserve for Depreciation or Accumulated Depreciation to show the total to date of all asset depreciation still on the books. Each year's depreciation is booked as a debit to expense and a credit to this account. Since fixed assets have a debit balance, the accumulation of yearly depreciation will eventually bring the total of fixed assets to zero. But since builders replace some of their equipment from time to time, a zero balance is never really shown.

When you sell or abandon equipment, remove from the books both the gross value and the accumulated

depreciation on that asset. This means maintaining detailed records for depreciation on each piece of equipment.

Other Assets

Include in this category all assets that don't properly belong in other categories, such as suspense debits and prepaid and deferred assets and deposits. (A suspense debit is an entry that's adjusted in the following month, such as changing a total loan payment to show the correct amounts paid to principal and interest.) Also include here an account called *intangible assets*. Intangibles are assets with no material property, as opposed to cash, fixed assets, and prepaid assets.

Goodwill is an example of an intangible asset. The seller of a business often adds a goodwill value to fixed assets, inventories, and other tangibles. If you sell your business, for example, you'll probably decide that the company's reputation in the community will generate business in the future for the new owner. You and the buyer agree on a value for this reputation and call it goodwill. The buyer pays you for goodwill as well as for the established values of material or tangible assets.

Another type of intangible asset is a "covenant not to compete." The buyer of your business might want assurances that you won't open a similar business in the same area and pull away old customers. Part of the buying agreement would include a covenant by which you promise not to compete within a defined geographical area for a certain number of years. The buyer pays an agreed sum of money in return for the covenant.

Goodwill can't be amortized or depreciated and it remains at its original value indefinitely. But a covenant can be amortized over the period of the agreement, as long as it was purchased from the seller.

Current Liabilities

Like current assets, which are liquid and convertible within one year, current liabilities are payable within one year. Accounts payable, taxes payable, notes, contracts, and deposits to be refunded are all examples of current liabilities.

Say you obtain a four-year note from a bank. The current debt is 12 months' payments and the long-term debt is 36 months' payments. This distinction is important, because you should be able to see current assets and liabilities in relation to one another. As you

repay the note, the last portion you remove from the books is the current portion, because at any time during the first 36 months the balance sheet should reflect 12 months' current debt. During the last 12 months, the current debt decreases each month.

Long-Term Liabilities

Some liabilities exist on a builder's books for a long time. If these amounts aren't payable within one year, keep them apart from current liabilities. The most common type of long-term liability is a long-term note or a contract payable. You may have other liabilities on a long-term basis, such as advances from officers or partners. These loans may be sizable and may never be repaid in full. The loans may have been made out of necessity originally, and may not become current for many years.

Other Liabilities

Include deferred credits or unusual items here rather than with long-term liabilities. Long-term liabilities will eventually become current liabilities, but deferred credits are likely to be clearing or "wash" items that enter this account and are soon cleared back out again.

Contingent Liability

This is a debt that does not occur now but may in the future. Because it's only a possibility, the amount isn't added in with the other liability balances. But be sure you disclose it on financial statements. A possible debt from a pending lawsuit or a potentially unrecoverable loss are examples of contingent liabilities.

Equity Account

Partnerships have an account called *partners' equity* while corporations have an account called *capital stock*. This account represents the original investment of the owners of the business.

Capital stock accounts are only changed by the addition of new capital or the removal of old. Partners' equity accounts are adjusted each year. Profits are split and added to the equity accounts. Amounts withdrawn, called *draws*, are deducted from profits. This provides a yearly running balance of each partner's investment balance in the company. These accounts should remain at about the same amount for each partner in an equal partnership. Some equal partnerships have only one working partner. It would be unfair to deplete his equity account by

showing his draw, with no draw taken for the other partners. The working partner should be paid a salary so that all the equity accounts increase or decrease in fair proportion to the percentage of ownership.

Retained Earnings

Corporations have a *retained earnings* account in addition to a capital stock account. Once the corporation is operating, each year's profits and losses end up in this account. The balance of the account is the to-date accumulation of profits, losses, and noneductible expenses.

Partnerships have a similar account into which all profits and losses flow. But it's closed out each year as the partnership accounts are updated.

Corporations sometimes give out part of the retained earnings as dividends to their investors or stockholders. Partnerships are more flexible and can simply increase the amounts drawn by each partner. Draws aren't taxed as are corporate dividends. Each partner pays tax only on his share of profits.

Members of partnerships often express surprise when they discover that their taxable income is higher than the amount they withdrew that year. This can happen in a very profitable year, and the reverse can occur in a period of poor performance. Partners are taxed based on their share of profits *on the books*, regardless of how much they actually withdraw in cash.

Net Profit

Each year's net profit or loss is recorded and placed into an earnings account when the books are closed at the end of the year. This account may be called a *retained earnings* account (corporations) or an *equity account* (partnerships). Profits are taxed in any corporation, but the amounts drawn or distributed in partnerships are never taxed. Individual partners each pay their own share of the profits, whether or not they've taken the money out of the business.

The net worth of an organization increases or decreases directly with profits and losses. An organization that loses money every year will eventually deplete its net worth into a negative number. Owners or partners are then pumping their own money back into the business to keep it alive, or depending on outside financing.

When the net worth is a negative number, the liabilities are larger than the assets and the company may

be insolvent. Bankruptcy often occurs in such cases because the owners overdraw against their profits.

Income Statement Accounts

The income statement contains the following account categories in the order they appear on the statement.

Gross Sales

This includes all recognized account categories in the order they appear on the statement. Recognized income is usually not the same as cash received. First, receivables represent unadjusted income. Second, the accounting method you use determines the amount of income you book. Under the completed-contract method, no income is booked until the contract is complete. Income on such accounts is recorded as a deferral. Percentage-of-completion accounting recognizes income as the contract progresses, regardless of the billings or timing of payments. Billings are often prepared and mailed to reflect the correct percentage.

You can use a hybrid method to recognize income. In this case, short-term contracts are accounted for by the completed-contract method and long-term contracts are accounted for by the percentage-of-completion method. This hybrid method is the most realistic and practical to use. But whatever method you use to account for income, include on the income statement a supplementary schedule and note, explaining what the gross sales amount represents.

Returns and Allowances

This category of accounts decreases sales from gross to net. Sometimes income is returned or allowances are made for special provisions. The amount of gross sales is lowered by the amount of returns or allowances. This account is less commonly used by builders than it is by other businesses like retail shops, where many purchases can be returned for cash. But returns occur in your yard from sales you make to the public. List the amount of these returns separately.

Direct Costs

This account shows the total of all direct expenses, adjusted by the change in inventory.

It's important to distinguish direct costs from operating expenses. Find the gross profit figure, a significant indicator on income statements, by subtracting direct costs from net sales. The percentage and the amount of gross profit indicate your profit and yields potential. Direct costs, because they relate directly to sales, vary directly with increases and decreases in volume. Make a yearly comparison of gross profits.

Direct costs are for materials, direct labor, payments to subcontractors, and other costs. The amount of direct costs also reflects the change in inventory level as shown in the following:

Direct Costs:

Inventory, 1-1-20__	xxx
Add: Materials Purchased	xxx
Add: Direct Labor	xxx
Add: Other Direct Costs	xxx
Total	
Less: Inventory, 12-31-20__	(xxx)
Direct Costs	xxx

Materials purchased and used to increase inventory decrease the total of direct costs. Materials used from inventory increase direct costs.

Operating Expenses

Include in this account all indirect expenses. Operating expenses are sometimes split into selling expenses and fixed overhead for a more detailed breakdown. You can also break down operating expenses into production and administrative expenses.

Report operating expenses in one or two lines and explain these expenses on a detailed summary schedule. This lets the income statement itself show a minimum of detail and allows the reader to scan it without examining the itemized listings of relatively small expenses. You can also show the expense totals for several large-balance accounts and lump the smaller expenses together in one *all other* category.

Tax Provision

This account category should include federal, state, and local taxes, even if you haven't paid or deposited the amounts yet. Establish each tax account in the period of the tax liability so you know how much of an increase in your net worth to expect.

This provision allows you to show a profit before income taxes, and then list the tax provision by itself. In this way, the reader of the financial statement can

view the profitability of your business without considering the tax consequences of operations.

Don't list tax liability for partnerships, which are only shells created for the convenience of each partner. Partners file and pay their own income taxes, and the partnership isn't affected by their personal liability. But corporations pay income taxes regardless of the profitability of the investors. For tax purposes, a corporation is an individual and has its own tax liability like anyone else. It's a business entity created for the participation of several investors.

Statement of Cash Flows Categories

Under the two previous sections (Balance Sheet Accounts and Income Statement Accounts), we broke down the accounts on each of the financial statements. The contents and sequence of accounts on those statements correspond to the general ledger accounts.

This is not true of the Statement of Cash Flows. Instead, this statement reports the balance sheet accounts as they've changed during the reporting period, broken down into two sections.

Changes in Long-Term Assets and Liabilities and Capital Accounts

First is the change in long-term assets and liabilities and capital accounts. The change from the end of the previous period to the current period is shown in detail by type of change. These changes include two major divisions; Sources and Applications of funds.

Sources include:

- Net profit on a cash basis (adjusted by non-cash expenses like depreciation).
- Funds received from the sale of capital assets.
- Funds received in the form of loan proceeds.
- Investments of capital by stockholders.
- Increases in long-term liabilities.

Applications include:

- Funds paid for the acquisition of capital assets.
- Reduction in long-term liabilities.
- Dividends paid or payments to stockholders.
- Decreases in long-term liability accounts.

The net differences in these long-term asset, long-term liability, and capital accounts result in a net increase or decrease in funds for the period.

Summary of Net Changes in Working Capital

The second section of this report is a summary of net changes for the period in your working capital. The term “working capital” refers to the net difference between current assets and current liabilities. In this section of the report, the change from the beginning to the end of the period is reported for all current accounts. The net change in working capital balances with the net increase or decrease reported at the end of the first section.

Of the three financial statements, this one is the most difficult to understand or to interpret. Often it's not even prepared because many builders, some accountants, and most lenders don't really appreciate the information or its value. The Statement of Cash Flows summarizes on one page where the money came from during the year, and where it went. It's broken down between current and long-term as a means of showing how working capital moved around during the year. For a detailed analysis of financial status, this is a valuable statement.

Footnotes to Financial Statements

The final section worth discussing is the footnotes to financial statements. These can be brief or highly detailed. While the tendency is to view footnotes as not very important, that's not the case here. They should always be read with great care, as many items affecting financial strength won't be reported on the financial statements, but could be noted in the footnotes.

Footnotes could include disclosure of items such as:

- *Current market value of real estate.* Under accounting rules, property is always shown on the books at original acquisition value — no matter how much it's really worth. You might own your land and building, having bought it 20 years ago for \$75,000, but it could be worth \$300,000 today. This isn't an unusual situation. A footnote can document this by reference to a recent appraisal.
- *Changes in valuation method of inventory.* Profit and loss can be modified significantly when you change the method of inventory valuation.
- *Extraordinary items.* These are one-time adjustments that affect profit and loss and won't recur in future years. Included are write-offs of damaged inventory, income or loss from lawsuit settlements, foreign exchange adjustments, and inventory valuation changes.
- *Contingent liabilities.* If someone has filed a lawsuit against your company, that potential liability doesn't show up anywhere on your books. However, it should still be disclosed. A footnote detailing the contingency is important information.
- *Unreported liabilities.* Some types of obligations don't show up in your books. For example, if you're obligated to make monthly payments for leasing equipment, that isn't shown as a liability. It shows up only in the form of a footnote.
- *Accounting disputes.* If your accountant doesn't agree with the way you've treated a specific series of transactions, or interprets your books differently than you do, a footnote can disclose this disagreement.
- *Accounting adjustments.* Some changes to report percentage-of-completion of completed contract journal entries are very significant. For example, you might be 90 percent complete on a job yielding an overall profit of \$500,000. This won't be reported until next year, even though almost all of the work took place this year. This footnote would be very important.

It's possible that additional footnotes will be required for special situations. They report any and all information not reflected in the statements, but of importance to anyone who's trying to understand your financial situation. Unfortunately, the conventions dictating how financial statements are prepared don't always allow for accuracy and complete information; thus, the need for footnotes.

Test Questions:

1. The Balance Sheet:

- A. Summarizes income, costs, and expenses, and shows the balance between income and profits.
- B. Summarizes cash flow for the period covered.
- C. Shows the status of assets, liabilities and net worth as of a specific date.
- D. Includes assets, liabilities, net worth, cash flow, and profit or loss, all on one page.

2. The Income Statement:

- A. Is prepared only if there is a net profit for the year; when there is a loss, a loss statement is prepared instead.
- B. Summarizes income, costs, and expenses for a specified period of time.
- C. Is vastly different than the profit and loss statement.
- D. Is always prepared on the accrual basis.

3. The Statement of Cash Flows:

- A. Is a summary of cash received and cash paid during the year.
- B. Is simply an income statement, prepared on the cash basis.
- C. Is a relatively obscure financial statement that is of little real value.
- D. All of the above.

4. The Statement of Cash Flows' net increase or decrease should be equal to the change between:

- A. Net profit from the earlier period to the current period.
- B. All assets minus all liabilities, from the beginning to the ending date of the statement.
- C. Retained earnings from one year to the next.
- D. Current assets minus current liabilities, between the beginning and ending dates of the period.

5. The basic formula for the Balance Sheet is:

- A. Assets plus liabilities equals net worth.
- B. Liabilities less net worth equals assets.
- C. Assets plus net worth equals liabilities.
- D. Assets less liabilities equals net worth.

6. The trial balance is:

- A. A worksheet prepared to determine whether net profit is high enough.
- B. A test of the general ledger's balance.
- C. An exercise used primarily in first-year bookkeeping classes.
- D. A worksheet used only when preparing a budget.

7. Supplementary schedules:

- A. Should be used to give your financial statements a professional look.
- B. Are used only by accounting firms when they prepare audited statements.
- C. Should be used whenever you need to explain something in greater detail than you show on the primary statements.
- D. Are used only for legal disclosures.

8. A contingent liability is:

- A. A potential debt that might or might not become an actual liability.
- B. A liability that's used only for the purposes of developing a conservative statement.
- C. A liability that isn't due for one year or more.
- D. Deferred income and really not a liability at all.

9. Retained earnings are:

- A. The accumulated earnings left in the company from one year to the next.
- B. Earnings kept by the owner and not reinvested.
- C. Real earnings for tax purposes.
- D. Another name for capital stock.

10. The tax provision is:

- A. A reserve account to pay future taxes, included in the net worth section of the Balance Sheet.
- B. A reduction of assets that serves as an estimate for income taxes.
- C. A reduction of net profits at the end of the income statement, to arrive at an after-tax net profit.
- D. A liability account if you have not yet paid your income taxes.

11. The purpose of the Statement of Cash Flows is to:

- A. Provide a summary of budget variances for the year.
- B. Show where likely sources for borrowing money can be found.
- C. Summarize changes in working capital and other Balance Sheet accounts during the year.
- D. Prove that the numbers on the Income Statement add up.

12. Footnotes are an important part of the financial statement because:

- A. Some financial information isn't reported on the statements.
- B. Some liabilities might or might not come to be.
- C. One-time items have to be reported to explain big changes for the year.
- D. All of the above.

13. A "contingent" liability is one that:

- A. May be paid at a later date if you desire.
- B. Is reported as a footnote to the Balance Sheet.
- C. Is properly classified as a bad debt.
- D. None of the above.

14. Closing adjustments are intended to:

- A. Make your financial statement accurate by allowing for last-minute changes.
- B. Reduce tax liabilities when possible by reclassifying expenses.
- C. Force a balance when you find errors in your books.
- D. Maximize non-cash expenses in the current year.

15. Working capital refers to:

- A. The balance in your bank account.
- B. All of your current assets.
- C. The net difference between accounts receivable and accounts payable.
- D. The net difference between current assets and current liabilities.

Using Financial Information

For a modest-size business, success depends upon the builder's ability to personally control the operation's finances. Well-prepared financial statements provide a basis for financial control that doesn't exist in any other form. Of course, common sense and a talent for building have no substitutes. But applying financial statements to current conditions and managing your operation with long- and short-term goals in mind are just as vital to a growing, healthy business.

Many builders have an oversimplified concept of financial statements. They tend to take bits of information out of context and apply them randomly to the business and prejudge it. For example, a company's income statement might show a \$20,000 profit but the builder has no cash. He may ask, "I made \$20,000 — where is it?"

The answer isn't always simple. The builder might assume that his information is faulty. But he may simply not understand how to apply his data. Profit isn't an indicator of cash flow control — it merely shows the yield on sales volume. Several factors could contribute to absorbing the builder's \$20,000 profit:

- An increase in outstanding accounts receivable
- A decrease in accounts payable
- Heavy commitments to payment of notes (not taken into consideration in profits)
- Purchase of new equipment
- Partnerships with draws in excess of profit

A combination of some or all of the above would certainly affect cash flow. So the builder should consider the cash flow statement in addition to the income statement. No one statement by itself can tell the whole story. And no piece of financial data alone makes sense out of context.

■ Apply Financial Information

Any business depends on the ability of its officers to control finances by applying their analyses and raw data to their practical knowledge. You can't control your cash flow if you can't understand the statements or know how they relate to operations. Any successful builder understands that numbers by themselves don't tell the story unless he knows what those numbers mean to every phase of his business.

Controlling the purchase and disposal of fixed assets intelligently depends on careful long-term planning. Too often, builders make large equipment investments only when cash is available. Others buy equipment only if they can get financing from a bank. These approaches make it impossible for a builder to enter into contract commitments that depend on his supplying the heavy equipment required. Bidding on such jobs would mean taking too many chances. As a result, the builder stays small.

Start your expansion plans by regularly analyzing a well-prepared, complete set of financial statements. This lets you develop an overall financial plan whereby you place your operation in a position to afford the new equipment you need. Buying the equipment when it is needed becomes a goal that develops from a cash flow and profit concept you formulated months before.

Financial statements can also help you plan for debt repayments, for new financing, and for the uses of those loans. Covering accounts receivable, building an inventory, buying new assets, and getting through a seasonal slump with cash to commit in the busy season are reasons for controlling cash flow by analyzing financial information. Make decisions to get loans, cover accounts receivable or seasonal slumps, and increase inventories with a full understanding of the financial impact those moves will have on operations. Only with knowledge based on financial reports can you know you're making the right decisions.

Financial statements are invaluable in helping you control costs and expenses. You can't possibly know whether your efforts are successful unless you see the results each month on paper and compare them to previous statements. For a good builder interested in raising profits and volume it's only good common sense to prepare monthly statements along with budgets and cost and expense forecasts.

Without this essential information you don't really know whether you're making enough profit on your investments in equipment and inventories. Statements drawn up only once a year are too far apart

to be useful in a constantly changing business climate. And you can't wait till next year to find out you could have raised your profits this year if you'd only had statements for a critical month.

Setting Standards

Previous chapters discussed the need for establishing financial standards. Standards are basic budgets. You need standards to increase building volume, the type and quality of that volume and the expected yield from it. A standard may be expressed as a percentage, a ratio, an amount, or a level in relation to some other factor (such as bad debts to accounts receivable or expenses to direct labor).

Don't base your standards on other operations, or a vague idea of what you think you can achieve, but rather on financial statements that you've analyzed practically and with the future in mind.

Standards based on other operations are dangerous and untrustworthy. Many builders run operations similar to yours, but every owner's personality and every operation is different. The personality of the builder affects the conduct and philosophy of the operation, and all successful builders have found their own way to achieve that success.

Another builder's labor force may be different from yours. Standards also vary with geographical location, and with the year or season the business begins operating. The location of office and shops, the degree of initial success of a new operation, the capitalization available and the kinds of work performed all influence the nature of a business and make each operation unique. Because there are so many variables, standards cannot be taken from one operation and applied to another without extensive modification.

Setting and enforcing standards is a continuous job. You can't merely set a standard once a year based on the financial statements alone and sit back to let it enforce itself. Modify your business assumptions as you get new information.

And keep your eye on your overall goal. This goal — it might be growth, expanded markets, new geographical areas of operation and the like — should be the focus of the standards you set.

Be sure to establish the degree of control needed to reach your goals. A well-organized operation has controls and standards that are interdependent and rest one upon another like blocks in a pyramid. At the top is the overall goal of the builder. Below that

are a few well-defined general standards. Still below those are a variety of controls, needed to bring about the standard.

There are four major areas in which standards must be set. These don't include minimum accounting standards, tax regulations and record-keeping duties required by law.

- 1) *Planning* Devote part of your time to planning for the future. Some successful business owners claim that more than half of their hours are spent developing goals and future concepts. This is not always practical for modest sized builders who need to budget their time carefully. Heavy direct commitments don't allow much time at all for planning. Yet the only way to implement your standards to reach your financial objective successfully is through planning — and that requires some time out of every day.
- 2) *Analysis* Analyze your results in order to define your goals. No business condition stays the same for long, and the builder who ignores well-prepared analysis documentation suffers by losing touch with the direction his operation is taking.
- 3) *Control* To reach goals and carry through on the conclusions drawn from intelligent analysis, become directly involved in control. No matter how enthusiastic key employees are, they can never approach company problems with the intimate concern you have for your own shop. That means operational and financial control is *your* job, and you must set control standards for the rest of your personnel.
- 4) *General matters* You spend some time each day deciding on many incidental planning matters such as which jobs to bid, how much insurance coverage to buy, when to start preparing for the heavy season and the like. Without well-organized schedules on how much time to spend in each decision area, you can easily get bogged down in details.

Find time for these four areas every day. They may at first seem secondary in importance to bringing in profits, but in fact they are essential. In the middle of the pressures and deadlines it might not seem practical to spend all that time with the books, feet on the desk, planning the future. But take an hour or two each day and follow up on planning matters. An hour a day is vastly more effective than a Sunday catch-up session once a month.

While complete accounting records and well-prepared financial statements are only some of the many

tools you use to set standards and achieve goals, they let you make intelligent planning decisions based on objective data. This is not the same as practical experience. But if you aren't totally involved in operations, you make it very difficult to direct the company toward broad, long-term goals.

Enforcing Standards

The four areas of standards and controls — planning, analysis, control and general functions — need constant definition and enforcement: Standards only work when you follow through on them and continually question their validity. Ask yourself the following questions when you evaluate which plans to enforce and which plans to scrap as out-of-date.

- Is the plan realistic? If not, it won't work. If it is, proceed with confidence.
- Do other business factors support the plan's basic idea? For example, is it realistic to expect a large increase in volume? Will the market demand support such growth? Does a subsidiary plan exist to increase the labor force to meet this objective? Will funding be available?
- Have changes in the economy been considered in putting together the plan? Is the plan conservative enough to weather these changes?
- Will the plan bring in profits?
- Does the plan fit into the overall strategy of the operation?
- Is the plan expressed in terms of a goal? That is, is there an outside limit or deadline by which the plan is to be realized?

Coordinate analysis standards with planning standards. Analysis and paperwork must serve some needed purpose or it's a waste of effort. This can be one standard for any new work you take on: Does it contribute to higher profits, cut time, or have some practical application?

Analysis should "pull its own weight." It should produce profits directly or indirectly. Analysis without a useful end result is frustrating and wastes time, energy, and management effort. Together, financial analysis and control can keep business on a steady keel. When your operation develops a problem, isolate the problem area and all other areas that are affected by it. Then analyze the problem for all the possible solutions that reverse the trend or eliminate the problem. Choose the solution that has the fewest adverse side-effects to other areas of the operation.

Some types of controls call for only occasional checking, while others need daily attention. These regular controls become time-consuming if they aren't managed properly. Planning based on direct labor hours requires monitoring the field constantly to make sure that idle time doesn't eat up profits. A large part of this function can be assigned to superintendents or foremen; but try to work directly with the initial scheduling phases and with the contingencies for direct labor.

Results of past controls or of uncontrolled jobs can serve as a guideline for realistic enforcement in the present and future.

Budgeting time in your own work day is a good place to control enforcement. Don't let your time be totally consumed by administrative functions like arguing about discount and freight terms, buying insurance, hiring new employees, terminating or reassigning existing employees, consulting with estimators about the small details of bids, and fending off salesmen. Allow only so much time per day for these duties. Make the problems fit the schedule. This gives you time to enforce your overall standards and a chance to think about long-term goals.

■ Using Financial Information

Financial statements are too often merely numbers. They are often prepared only to comply with a procedure, to fill out a form, or to apply for a loan. These are only functions of paper flow, not useful in themselves. Financial data must be acted on to be effective; from it you should be able to direct sales efforts, control costs and expenses and plan profits.

Rather than issuing financial statements in pre-established formats, highlight exceptionally notable items on your reports. This way, recurring problems aren't buried in a mass of numerical columns. Control depends upon flagging the exceptions and reversing the trends that those exceptions indicate. Highlight these problem areas by preparing the reports in standard formats but adding footnotes or extra worksheets to explain or analyze special situations. Then summarize the information on another sheet, omitting unnecessary details.

Controlling Cash Flow

A statement of cash flows is issued to report on the company's recent cash activity. Unfortunately, by

the time the report is issued everything on it has already happened. The builder has documentation, but no control over the events documented.

Get around this problem by analyzing your cash flow as often as necessary. Look at your cash flow against a budget. Make up a cash flow report, once a week or even once a day, and compare it to budgeted amounts for that period. On the cash flow report, analyze and summarize receipts and payments, carrying the balance forward to the next day. This way, you can continuously monitor your actual cash flow using estimated figures.

Time large spending, such as for new fixed assets, according to the cash flow budget. Know your needs well in advance of a purchase date and know where the funds will be generated to meet those needs. By the time a cash flow statement is issued, the weekly or daily budget controls have paid off.

The statement of cash flows points out in a summary form the areas of cash problems in the immediate past. It lets you modify cash flow budgets in the future and maintain pre-established performance standards.

Nothing motivates a builder to control receivables like not having enough cash on hand. But controls resulting from actual necessity are often too late to be fully effective. By the time a regular procedure is established to collect old receivables, for example, many of those accounts have become uncollectible. The proper way to control receivables is to start with a credit check prior to granting credit.

Another example of improper cash control is to suddenly discover that your inventory is much too high or contains many "dead" items or damaged and unusable parts.

Yet another costly cash flow problem results when you invest in an asset that you don't really need. Purchase fixed assets only after evaluating the need for them and the yield expected from the investment. Design a cash flow arrangement that allows the purchase of the asset with the least strain on your budget. Don't let cash availability problems become chronic. Several cash flow mistakes can compound the effect on your operation.

One of the most common losses due to bad cash management is that of discounts on purchases. Discounts you take from suppliers on a large inventory volume can represent a significant amount of profit. Too often, builders don't have the cash available by the 10th of the month to take advantage of the discount terms. They may be fully solvent, but due to

timing problems the cash just isn't available. This can result in losses of thousands of profit dollars per year. Planning your cash flow against a budget, using cash flow reports to check current cash status, and analyzing your cash flow statement and comparing it to past statements can all help alleviate cash availability problems.

Short-Term Goals

Goals of one year or less are what budgeting is all about. You can apply a budget to any aspect of business to reach some short-term goals. Sales volume, costs and expenses, receivables, inventories, fixed assets and cash flow can all be controlled if a realistic budget is established and monitored.

Because the future depends on the present, planning for long-term goals means concentrating on current conditions. The dependability of a long-term goal decreases the further in the future you plan. Such long-term standards are best expressed as general ideals for the direction of the business.

On the other hand, short-term goals can be realized in the immediate future. They can be prepared realistically and then implemented and controlled in the business climate you know best — the present.

A budget is the best way to maximize short-term results, since you can compare past vs. present performance for blocks of time that are short enough to be practical and long enough to let you see how your controls are working. Following through on short-term budgetary goals is more effective in the long run than trying to realize long-term goals or concepts with a single year's profits and cash flow.

Financial information can be most helpful in setting your short-term goals. But remember that these goals are only general guidelines for your own use — they're not set in concrete.

Any estimate is flawed, because it depends on the past. While historical information is useful to a degree, there are many factors that can make it less than dependable as a predictor for the future. But as flawed as it is, historical financial information is probably your most dependable source for developing short-term goals. You can use the past to establish immediate standards for the future.

When your goals don't work out, remind yourself that setting them was only one way to monitor your progress and develop a control method. Without the goal itself, you have no means for monitoring progress, for grading your own performance, or for identifying areas needing more work.

Test Questions:

1. Analysis of financial information is necessary for:

- A. The preparation of accurate billing statements.
- B. Posting transactions to proper accounts in your books.
- C. Controlling profits.
- D. All of the above.

2. Knowing the amount of profit you earn isn't enough, because those profits could be absorbed by:

- A. Increasing levels of accounts receivable.
- B. Growth in retained earnings account balances.
- C. Increases in accounts payable.
- D. Growing competition from other companies.

3. Timing the purchase or sale of fixed assets:

- A. Is always a function of your need for available cash.
- B. Is a function of management goals and planning.
- C. Depends largely on your credit status.
- D. Should be based on requirements of current jobs.

4. Debt planning and management:

- A. Requires good contacts with local bank loan officers.
- B. Involves timely collection of accounts receivable.
- C. Involves careful analysis of financial statements and cash flow trends.
- D. All of the above.

5. Controlling costs and expenses:

- A. Is an on-going task for a well-trained bookkeeper.
- B. Occurs at the point of budget preparation and planning.
- C. May be helpful to some, but good managers always know where they stand.
- D. Enables you to maintain profits and profit goals.

6. Financial “standards” are:

- A. The regulatory requirements for preparation of financial statements.
- B. Developed internally as a method of measuring results.
- C. The accepted arrangement of accounts on financial statements.
- D. The rules and regulations accountants follow in auditing your books.

7. Standards should be:

- A. Set and enforced without exception.
- B. Established for the entire industry by the Federal Standards Board.
- C. Set and revised continuously to adjust to the changing environment.
- D. Established specifically for each job.

8. Standards need to be set as part of:

- A. Analysis, so you know what the numbers reveal in comparison.
- B. Financial statement formatting, for consistency from year to year.
- C. Clear communication with your accountant.
- D. All of the above.

9. Financial standards are most valuable when:

- A. They're in compliance with bank forms and requirements.
- B. They're used to spot and reverse negative trends.
- C. They conform to FSB regulations.
- D. They're included in a financial review by your accountant.

10. Short-term goals are:

- A. Unreliable, because real trends are best reviewed over many months.
- B. Short segments of your larger, long-term goals.
- C. Also defined as day-to-day operational goals.
- D. The least understood of business goals.

11. Setting financial standards on the basis of other operations is:

- A. A valuable, timesaving method.
- B. Untrustworthy.
- C. A standard procedure in the industry.
- D. Recommended by the FSB.

12. Cash flow analysis should take place:

- A. Only when a full budget review is being conducted.
- B. At least monthly, if not more often.
- C. As part of your quarterly review.
- D. Before you close the books.

13. Cash flow analysis is actually a study of:

- A. Where cash comes from, and where it goes.
- B. How well your cash accounts are kept in balance.
- C. Quarterly budget increases.
- D. All of the above.

14. Accounts receivable analysis:

- A. Includes a study of customer credit history.
- B. Requires an analysis of the level of charged amounts.
- C. Is based on the time it takes for customers to pay you.
- D. Is a function of budgetary control only.

15. Not controlling accounts receivable results in:

- A. Fewer sales than you have forecast.
- B. Fewer kickbacks to customers.
- C. Financial statements that are out of balance.
- D. Not having enough cash on hand.

Financial Ratios

This chapter defines the commonly-used accounting ratios and shows how to apply them in analyzing financial statements.

It's much easier to interpret financial information if the data can be expressed in some kind of summary format. Because of their size, numbers tend to become obscure when you examine several summaries together. Ratios are easier to analyze because they show the relationships behind the numbers concisely and simply.

Ratios can be expressed in several ways, depending on the type and context of the analysis. Here are the three most common expressions of ratio relationships:

- 1) The two factors or numbers expressed as *x to 1*. The second factor is given a value of 1 and the first factor is compared to it.
- 2) The two factors (*f*) expressed as a percentage, one to the other — $f \div f$ or *x%*
- 3) The two factors expressed as one factor to another as a component of 1 — *x per sales dollar*, or *x per day*.

These are clear and understandable ways to communicate financial and operational relationships. For example, the current ratio (current assets to current liabilities) is normally expressed by the first method — *x to 1*. Instead of saying that the current assets are \$266,000 and current liabilities are \$133,000, it's more helpful to say that the current ratio is 2 to 1.

Ratios let you boil down information into a usable form. Rather than merely presenting financial data, ratios interpret and draw attention to significant conditions and trends. Ratios can be used two ways:

- 1) To indicate a single business condition. Ratios are used alone to express a relationship between two factors at one point or period in time.
- 2) To indicate a trend. Two ratios from different periods or points in time are compared to show the amount of change between the first one and the second.

When ratios stand alone, they serve as general indicators of conditions, strengths and weaknesses in your business at any given time. To make them more valuable, compare ratios used this way to some standard outside your own company. You can get lists of average expense ratios from the Internal Revenue Service, and Dun and Bradstreet publishes the vital ratios of selected companies in all fields. The current ratio, for example, is used universally to measure a company's ability to meet current obligations from current assets. A 2 to 1 current ratio is the minimum current assets to current liabilities considered healthy for a business. A 2.5 to 1 current ratio is better, as explained later.

Two ratios from different periods can be compared to show how your business has changed over time. A trend is established when a ratio changes, indicating a change in the business condition the ratio describes. You find the trend by figuring the ratio in one period and the ratio in the second period, and then comparing the two to find the amount and direction of change. When you calculate this several times with ratios in successive periods, you plot a more reliable trend than if you use only two ratios in different periods.

Here's an example of how a trend shows you more about business than a single ratio. "Charge sales to total sales are .95 to 1" isn't a particularly significant statement by itself. It's more meaningful to say that "the ratio of charge sales to total sales has *increased* from 65 percent last year to 95 percent this year." It indicates a larger increase in that portion of sales made under credit terms, and it prompts you to ask the following questions:

- Is this a true increase, or are the numbers somehow distorted?
- Is this a good trend or a bad one?
- How does this increase compare to the increase or decrease in business volume?
- What change has occurred to affect cash flow in the average number of days that receivables are outstanding?
- How has this change affected the availability of cash?
- What is the trend in the ratio of bad debts to charge sales?
- Should this trend be reversed or decreased?
- What controls should be imposed on accounts receivable and charge sales?

- Are there many customers now participating in new charge sales or just a few? Are they good credit risks?

These questions are all inspired by one ratio calculated at least twice, once last year and once this year, at the start and finish of the period under study. The answers to them provide valuable information on the various aspects of the operation affected by the change in account relationships.

Ratios give specific kinds of information that you can use to analyze your operation. There are four main reasons for doing ratio analyses:

- 1) To check existing conditions and relationships as indicators of business health, so you can control and change them in the future.
- 2) To spot trends for the purpose of establishing standards and producing controlled yields within these standards.
- 3) To check on the effectiveness of existing controls.
- 4) To measure the levels of various accounts (such as Receivables, Inventories, Funded Debt and the like) in relation to other similar accounts.

You can calculate ratios based on two balance sheet accounts, on one balance sheet account and one income account, or on two income accounts. In addition, ratios can be created which compare non-financial to financial information. The rest of this chapter gives examples of how to form these ratios, what they mean, and how to use them to better analyze and manage your business.

■ Balance Sheet Ratios

Ratios that involve accounts found only on the balance sheet are called *balance sheet ratios* or *financial ratios*.

The Current Ratio

The current ratio compares current assets to current liabilities. Generally, a 2 to 1 current ratio is considered the satisfactory minimum. This means your current assets should be double your current liabilities. Compute the current ratio as follows:

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \text{Current ratio}$$

The current ratio is always expressed as x to 1. This ratio is favored by loan officers and credit departments as a good indicator of financial health. Since current assets are those you could convert to cash within one year, they represent the liquid assets of the company. Expect to pay any current liabilities within the same period. The current ratio gives a good idea of how able you are to meet current obligations with current assets.

The Quick Assets Ratio

The *quick assets ratio*, or the “acid test” as it’s sometimes called, is similar to the current ratio. It’s also expressed as x to 1, and is calculated using the same accounts as the current ratio. A minimum of 1 to 1 is considered healthy for the quick assets ratio. Compute this ratio as follows:

$$\frac{\text{Current assets without inventories}}{\text{Current liabilities}} = \text{Quick assets ratio}$$

More conservative than the current ratio, the acid test measures the immediate ability to pay current debts. Since inventories aren’t necessarily available and may not be converted at all within one year, they aren’t considered as readily available.

The Capital to Current Liabilities Ratio

The *capital to current liabilities ratio* is used to determine the owner’s investment in a business versus the creditor’s interests. Establish the relationship of debt to investment by comparing these two accounts.

$$\frac{\text{Capital}}{\text{Current Liabilities}} = \text{Owner's investment vs. creditor's interest}$$

The capital to current liabilities ratio is expressed as x to 1 or as a percentage. When the capital to current liabilities ratio is expressed as a percentage, it indicates how much of the non-current assets have been supplied by investment and how much by outside funding. For example, a ratio of 100 percent means that the owner of the business has supplied all non-current assets. A ratio of more than 100 percent means that the owner is supplying a portion of current assets as well. A ratio of less than 100 percent means that the current assets and part of the long-term assets are supplied by creditors.

Review this ratio along with that of *capital to funded debt* or *non-current assets* to find the amount of fixed asset investments.

The Working Capital to Funded Debt Ratio

Working capital to funded debt indicates the ability of an operation to meet its obligations. It also indicates whether a business is heavily dependent on outside funding. It is expressed as:

$$\frac{\text{Working capital}}{\text{Funded debt}} = \text{ } \%$$

Working capital is the net amount of current assets available; compute it as follows:

$$\text{Current assets} - \text{Current liabilities} = \text{Working capital}$$

The Specific Current Assets to Total Current Assets Ratio

The specific current assets to total current assets ratio shows you what percent of total assets the company’s specific assets represent, such as inventory to total assets or cash to total assets.

$$\frac{\text{Specific current assets}}{\text{Total current assets}} = \text{Percentage}$$

Compare specific current assets to total current assets ratios over a period of time to come up with trends showing how your distribution of assets is changing. Figure 23-1 is an example of this ratio analysis for a five-year period. While accounts receivable have increased as a portion of total assets from 26.6 percent to 37.3 percent in five years, inventories have declined during the same period.

This type of analysis can be misleading, especially when reviewed by itself. Instead, compare the figures against those of a similar analysis of sales in the same period of time. While accounts receivable represent a larger share of total accounts classified as current assets, the actual amount in relation to total sales may have decreased. It’s hard to tell whether the trends are good or bad without a full knowledge of the rest of the operation’s activities between the year this was drawn up and now.

Analysis of Current Assets

	Year -4	Year -3	Year -2	Year -1	Current Year
Cash	2.9%	2.6%	3.4%	1.9%	2.6%
Accounts Receivable	26.6	27.2	27.7	34.6	37.3
Bad Debts Reserve	(0.2)	(0.2)	(0.3)	(0.7)	(0.9)
Retainages	18.4	18.2	17.3	19.8	14.6
Inventory	52.3	52.2	52.0	44.4	46.4
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 23-1
Analysis of current assets

The Net Worth to Assets Ratio

The ratio of *net worth to assets* shows what share of assets is financed by owners and what share by creditors (represented by liabilities).

$$\frac{\text{Net worth}}{\text{Assets}} = \text{Owner financing vs. debt financing}$$

A variation of this ratio is that of *net worth to current assets*. This shows how much of working capital is financed by ownership, and what part by credit. Use these ratios to analyze the relative investments in your assets and liabilities accounts.

Combined Ratios

Ratios that compare accounts on the balance sheet to accounts on the income statement are called *combined ratios*. When you develop ratios for financial analysis, remember that the two accounts in the ratio should have a logical relationship to one another. For example, it makes no sense to compare accounts receivable to payroll. Receivables and payrolls have nothing in common. At the same time, there are

accounts which, although they are related, simply don't lend themselves to comparative analysis.

For example, inventories are related to sales but you shouldn't compare them in a ratio because the two accounts are presented on a different accounting basis. Inventories are kept at cost while sales are designed for a margin of profit. When you work with combined ratios, make sure the balance sheet accounts and the profit and loss (income) accounts used are accounted for on a similar basis and bear a logical relationship to one another. Otherwise, the ratio you calculate will be misleading.

The Sales to Accounts Receivable Ratio

Use the *sales to accounts receivable ratio* to analyze a trend in your charge sales policy. This ratio is normally expressed as x to 1.

$$\frac{\text{Sales}}{\text{Accounts receivable}} = \text{Trend in charge sales}$$

Don't conclude anything from this ratio unless the month-end activity for charge sales is consistent each month. Increased charges toward the end of a month will throw comparative ratios out of line if

those month-end events belong properly to the following 30-day cycle.

Examine this ratio over a year to determine a fair portion of charge sales to accounts receivable and whether more stringent controls over charge sales are needed. Compare average sales to average receivables for the period under study. This allows large seasonal distortions to be absorbed and may indicate a fairer trend, especially if major variations in sales and accounts receivable balances occur from month to month.

The Real Turnover or Physical Turnover Ratio

The *real turnover* or *physical turnover ratio* is one of the most helpful ratios a builder can calculate. You learned earlier that the inventory turnover ratio isn't reliable because it compares net sales on a markup basis to inventory on a cost basis. The two aren't comparable. But the real turnover ratio takes this into account:

$$\frac{\text{Cost of sales}}{\text{Inventory at cost}} = \text{Real turnover}$$

This is normally expressed as a certain number of times: "Real turnover of inventory occurred seven times last year." The value of this ratio is that it indicates the number of times the inventory is replaced (sold and repurchased). The preferable inventory number to use is the average inventory, but an ending inventory can give you a good indication of turnover.

A good application of turnover information is to divide the number of working days by the turnover to determine the days of inventory available to the builder:

$$\frac{\text{Total working days in one year}}{\text{Turnover}} = \text{Number of days of inventory available}$$

Be aware, of course, that the number of days of inventory availability changes with the inventory level. Take this into account along with any seasonal changes in business volume. These ratios can help you control the amount of dead stock on hand and the problem of under or overstocking.

Other Useful Ratios

The *maintenance to fixed assets ratio* provides you with a guideline to control maintenance expenses in relation to your investment in fixed assets.

$$\frac{\text{Maintenance expense}}{\text{Fixed assets}} = \text{Control of expense relative to investment}$$

Remember that fixed assets are usually a builder's largest investment. As more equipment is acquired and existing equipment ages, you can expect higher maintenance costs. Large increases in this account from one year to the next don't necessarily mean that the expense is uncontrolled. There should be a relationship between maintenance costs and:

- New equipment purchases
- Old equipment disposals (which should decrease year-to-year expenses)
- Old equipment aging

Each piece of equipment reaches a point in its useful life when maintenance cost exceeds the investment value for productive use of that equipment. If you develop good systems for analyzing profitability from equipment use, you can recognize when this point occurs and dispose of the equipment. A narrowing margin between maintenance expenses and fixed assets as maintenance rises is one of the signs that this point is approaching.

When the overall ratio begins to change, perform the test on each piece of equipment even though you may already know which equipment is causing problems. You can calculate the ratio by equipment piece if each piece has a complete cost file, as shown in Chapter 13.

The ratio of *equipment depreciation expense to equipment* is a good way to check your depreciation policy.

$$\frac{\text{Depreciation expense}}{\text{Equipment}} = \text{Depreciation policy ratio}$$

This ratio shows a rapidly decreasing percentage if you have few pieces of equipment and use accelerated depreciation methods. You should be able to tell from experience what the average real useful life of equipment is, and when to plan for replacements. Include in your replacement estimates a careful study of maintenance expenses by piece of equipment.

Use the *net income to net worth ratio* to check the overall efficiency of your operation.

$$\frac{\text{Net income}}{\text{Net worth}} = \text{True investment yield}$$

Unlike a comparison between income and sales, this ratio provides you with a *true* investment yield because it shows how the net assets of the operation have been applied to produce real profits.

Income Account Ratios

Income account ratios are used to analyze the relationships between gross profit and sales, expenses and sales, and net profit and sales.

The *gross profit to sales ratio* is expressed as a percentage. The ratio indicates the degree of control over direct costs.

$$\frac{\text{Gross profit}}{\text{Sales}} = \text{Percentage of gross profit}$$

Builders often find that this ratio begins to move in an unhealthy direction with significant increases in volume. This results from seasonal changes and from sudden market increases or decreases. Business owners tend to relax their controls when money isn't tight, and this ratio is a good control guide.

Changes in market types and in the cost of materials and labor also affect the gross profit ratio. The ratio acts as a warning signal. If costs are increasing, adjust your pricing policies to reflect those increases. Otherwise your markup won't produce the yields that it did before the increase, when it was adequate to cover expenses and allow profits.

Calculate the *operating expenses to sales ratio* when sales volume changes significantly from month to month and year to year.

$$\frac{\text{Operating expenses}}{\text{Sales volume}} = \text{Expense control ratio}$$

Expense controls need adequate monitoring in an environment of change. Calculate the ratio regularly to spot expense changes, then identify the causes. Changes can indicate either an increase in management control efficiency, or a reaction to a change in volume. Study the ratios for a period of time to estab-

lish a trend. Then make your expense expectation for a sales volume goal.

The *net income to sales ratio* shows the margin of profit. This is usually expressed as a percentage.

$$\frac{\text{Net income}}{\text{Sales}} = \text{Margin of profit}$$

This ratio is most useful when applied to financial statements broken down by line of business. Statements prepared this way minimize but do not eliminate the difficulties of assigning expenses to business lines. Assigning expenses is always an estimate at best. If you're satisfied that your assignments are fair and reliable, analyze the different yields on the product and service mix. You may find, for instance, that 20 percent of total production time is spent on high-yield jobs that yield 50 percent of profits — and that the remaining 80 percent of production time is spent on lower-yield but necessary jobs.

Presenting Ratios

Presenting ratios to others is as important as calculating the ratio itself. To have meaning, the ratio should be expressed so that its significance is best understood. There are four ways to present ratios:

- 1) As x to 1
- 2) As a percentage
- 3) As x per y (where y equals number of days, sales dollars, labor hours, etc.)
- 4) As a fraction

Figure 23-2 shows samples of three ratios. The current ratio is expressed as 2 to 1, the best medium for exhibiting this particular relationship. The days of inventory available are expressed in the x per y format — the number of days. The gross margin is expressed as a percentage. This commonly-used ratio is almost always presented in this format, demonstrating the percentage of margin before expenses.

Many books have been written on the subject of ratios and financial analysis. Generally, these are intended for use by bankers, loan officers, accountants and financial analysts. Remember that management conclusions drawn from detailed analysis aren't often expressed in ratios. But ratios can be used to support a management conclusion.

■ Comparative Ratio Analysis

You can't calculate any ratio only once and expect it to remain valid for long. Businesses change constantly. You've got to compute the same ratio at regular intervals to show the trend of the activity reflected by the ratio. The more frequently you compute the ratio and compare it with earlier ratios, the easier it is for you to draw conclusions based on the trend.

Analyze activities in your business using the most complete, comprehensive data available. Include all data that affects the activity in your study before you draw conclusions. For example, you can analyze sales trends in two main ways. You can trace sales totals over a period. But that doesn't include data that significantly changes those figures. Analyze sales along with net profits for a full year to discover the *quality* of your volume changes, not simply the dollar amount. This gives you the most profitable volume range for your business, since the data includes seasonal volume fluctuations and seasonal net profits.

Here are some useful reports comparing related activities. Many activities also lend themselves to comparative ratio analysis.

- Average accounts receivable compared to average total sales
- Inventory and inventory turnover ratios compared year to year and season to season
- Progressive repair and maintenance expenses (identified by piece of equipment over its life) compared to total fixed assets
- Sales volume compared to net profits

Comparing your own ratios to those of another operation has some value. But remember that no single company is "average" in any industry-wide ratio survey. Every business is unique, having its own set of underlying conditions affecting its ratios. Concentrate on your own operation. You know the conditions that make your ratios what they are. Establish acceptable ratio relationships for your own business circumstances. Set a personalized standard for the financial health of your company. Establish high and low ratio ranges, then check the effectiveness of your controls with monthly ratio analyses.

Current assets	266,450	
Current liabilities	133,225	
Current ratio		2 to 1
Yearly work days	240	
Real turnover	6.3	
Days of inventory available		38 days
Gross profit	254,814	
Sales	637,035	
Gross margin		40%

Figure 23-2
Samples of ratios

A List of Common Ratios

Here's a checklist of the ratios discussed in this chapter.

Balance sheet ratios:

Current ratio = Current assets ÷ Current liabilities

Quick assets ratio (acid test) = Current assets without inventories ÷ Current liabilities

Owner's investment vs. creditors' interests = Capital ÷ Current liabilities

Ability to meet obligations = Working capital ÷ Funded debt

Working capital = Current assets - Current liabilities

Percentage total assets = Specific current assets ÷ Total current assets

Owner financing vs. debt financing = Net worth ÷ Assets

Combined ratios:

Trend in charge sales = Sales ÷ Accounts receivable

Real turnover = Cost of sales ÷ Inventory at cost

Days of inventory available = Total working days per year ÷ Turnover

Control of expense relative to investment = Maintenance expense ÷ Fixed assets

Depreciation policy ratio = Depreciation expense ÷ Equipment

True investment yield = Net income ÷ Net worth

Income account ratios:

Percentage of gross profit = Gross profit ÷ Sales

Expense control ratio = Operating expenses ÷ Sales volume

Margin of profit = Net income ÷ Sales

Test Questions:

1. Ratios are useful in financial analysis because:

- A. They're easier to comprehend than dollar values.
- B. They make sense when summarized as relationships between financial values.
- C. Commonly-used ratios make sense to many people, including lenders.
- D. All of the above.

2. Balance sheet ratios include:

- A. Any two values, both of which are found in balance sheet accounts.
- B. Comparisons of values in any two accounts, but affecting something of significance in financial strength or net worth.
- C. Sales information compared to debts.
- D. Any ratio that is footnoted on the balance sheet.

3. The current ratio is a comparison between:

- A. Any two current accounts, as opposed to comparisons between reporting periods.
- B. Current assets and current liabilities.
- C. Current and long-term notes payable.
- D. Current sales and cost information, as opposed to current versus long-term averages.

4. The quick assets ratio is:

- A. Just like the current ratio, but without inventory values.
- B. Another name for the current ratio.
- C. A comparison of assets that could be sold quickly and converted to cash.
- D. An income statement ratio comparing sales but excluding all sales made on account when those accounts are currently past due.

5. Working capital is:

- A. The owner's original investment in the business.
- B. The amount of cash in the bank account at the time the ratio is computed.
- C. Profits reinvested in the business.
- D. Current assets less current liabilities.

6. A combined ratio is one that compares:

- A. Current period information to past period information.
- B. Three or more different accounts combined together on one side of the ratio.
- C. A balance sheet account to an income statement account.
- D. All of the above.

7. The "real" turnover ratio compares:

- A. Sales to inventory at cost.
- B. Sales to inventory at current market value.
- C. Cost of sales to inventory at cost.
- D. Cost of sales to inventory at current market value.

8. A ratio comparing accounts receivable to depreciation is:

- A. A combined ratio.
- B. A static ratio, because both sides of the ratio are based on a balance at the time of the statement's preparation.
- C. Generally assumed positive if the result is better than 2 to 1.
- D. Worthless, because there is no relationship between these accounts.

9. Ratios can be presented:

- A. In the form "x to 1" or "x per y."
- B. As a percentage.
- C. As a fraction.
- D. All of the above.

10. When analyzing the results of ratios, it is best to:

- A. Consider each period separately.
- B. Always compare between periods, to spot emerging trends.
- C. Let your accountant use his specialized training to judge results.
- D. Begin with a series of assumptions and discount information that doesn't meet those assumptions.

11. The working capital to funded debt ratio indicates:

- A. Whether or not it's time to borrow more money.
- B. How many current accounts payable are past due.
- C. Your ability to generate fast payment of accounts receivable.
- D. Your ability to meet your obligations.

12. Ratios comparing specific current assets to total current assets:

- A. Help in the period-to-period analysis of accounts, such as inventory accounts.
- B. Are a meaningless exercise providing no useful information.
- C. Should always show a high percentage of cash.
- D. Are required by all lenders.

13. The net worth to assets ratio breaks down assets between:

- A. Current and long term.
- B. Tangible and intangible.
- C. Those financed for the short term and those financed for the long term.
- D. Those owned by the company and those financed by creditors.

14. A ratio comparing sales to accounts receivable:

- A. Should include all sales.
- B. Should exclude cash sales, involving charge sales only.
- C. Is shown as a percentage on your report.
- D. Doesn't provide any useful conclusions.

15. A ratio studying maintenance costs with the total value of fixed assets:

- A. Tells you if maintenance personnel are overcharging.
- B. Helps you to justify next year's budget numbers.
- C. Helps show you when equipment might need to be replaced.
- D. Helps you determine the salvage value of capital assets.

Putting Together a Statement

You should be able to delegate financial statement preparation to an employee, your bookkeeper, or an accountant. But before you can supervise the bookkeeper, you need a working knowledge of statement procedures. You should even be able to prepare the statements yourself. If you're aware of the whole operation, you have a better chance to turn that financial data into added profits. This chapter takes you through the steps of preparing a statement, from account coding, posting accounts and test balancing, making the trial balance and closing adjustments, to drawing up the statement itself.

Account Coding

The most common headache for builders and their bookkeepers is coding accounts properly. The usual problems are poor definitions and inconsistency. That leaves the chart of accounts open to interpretation by each person who uses it.

For example, the purchase of business cards could be assigned to office supplies, printing, sales promotion, or advertising. Each employee who handles coding may have a different idea about where to assign this and other items. Within a year, similar or identical expenses could end up in several different accounts. Your financial statements would contain inconsistent and misleading details because the general ledger hadn't been properly maintained.

If you suspect that your coding has been inconsistent, go back through the accounts for several months and analyze the treatment of various expenses. Unless you search for them, account coding mistakes are usually only discovered under two circumstances. First, when accounts are obviously incorrect. Second, when actual expenses are significantly higher than budgeted expenses. One benefit of a good expense budget is that you're alerted

whenever the actual costs vary too far from budgeted amounts. Then you can perform an analysis to find out why.






Once you discover an inconsistency, first adjust the account assignment. Then prevent future coding errors by tightening up and refining your account definitions. Make up a chart of accounts with a written description of each account category and what types of items it includes. You or your bookkeeper can then refer to the definitions whenever you code items. See Appendix A for a complete chart of accounts for the general ledger.

The General Ledger

The general ledger is nothing more than a summary of your business activities. Every asset, liability, net worth, income, cost and expense account is listed here. Some types of accounts, such as expenses, can be combined into one large account. Then you can keep a sub-account for each expense under the main heading as a ledger account control.

This saves space and posting time. The real detail is in the specialized journals — sales journal, check register, payroll, accounts receivable, payable records and the like.

Keep the general ledger as concise as possible, with as few divisions as necessary to prepare a good financial statement. The general ledger isn't the place for large control listings. And don't use it to support in detail the figures on a financial statement. A brief general ledger is easier to control, and produces statements more easily, than a bulky ledger that's full of detail and hard to balance. Remember the following points when you make entries in the general ledger:

-  Keep the general ledger in balance.
-  Keep the general ledger in a summary format — don't let it become too detailed.
-  Entrust the general ledger only to employees who are competent to work in it.
-  Refer to the general ledger for spot-checking and quick reference.
-  Develop a full understanding of the workings of the general ledger.

Leave a good *audit trail*. This means that whoever reviews your statement should be able to trace all your account entries back to the original document which supports the final entry itself. An audit trail

might start with an entry on a financial statement referring to a specific account in the general ledger. The entry in the general ledger account should, in turn, refer back to an entry in the check register (for checks), the receipt journal (for income and cash receipts), the payroll journal (for payroll and payroll taxes), or the general journal (for all adjustments and special journal entries).







The general ledger may refer to any of these entries with a code. For example, the check register may be called "CD" (for "cash disbursement"), and the check register page may be identified as "01-06" (year 2001, page 6), as explained later.

From any of these entries you should be able to trace back to a canceled check, a duplicate bank deposit slip, or a full explanation of the entry (for general journal entries). The check register, for instance, lists the check number and vendor. The paid bills file should contain in alphabetical order a copy of the check request, a voucher document, or a carbon copy of the check along with the paid bill itself. Income account entries are further supported in the accounts receivable system. Payroll entries are traced back to the payroll summary and time cards. Special journal entries can be traced back to well-documented worksheets.

The figures on the statement are thus verified all the way back to the original document. The audit trail is complete when you can do this for every account on the entire financial statement.

General Ledger Posting

The general ledger is broken down into the following main categories:

-  Assets
-  Liabilities
-  Net worth
-  Income
-  Direct costs
-  General expenses

These main categories may be further broken down in sub-categories. For example, some general ledgers distinguish between selling expenses and direct overhead, or carry additional sections for *Other income* and *Other expenses*.

Use index tabs as in Figure 24-1 to make access to your general ledger more convenient. Figure 24-2 shows a typical general ledger account page. The

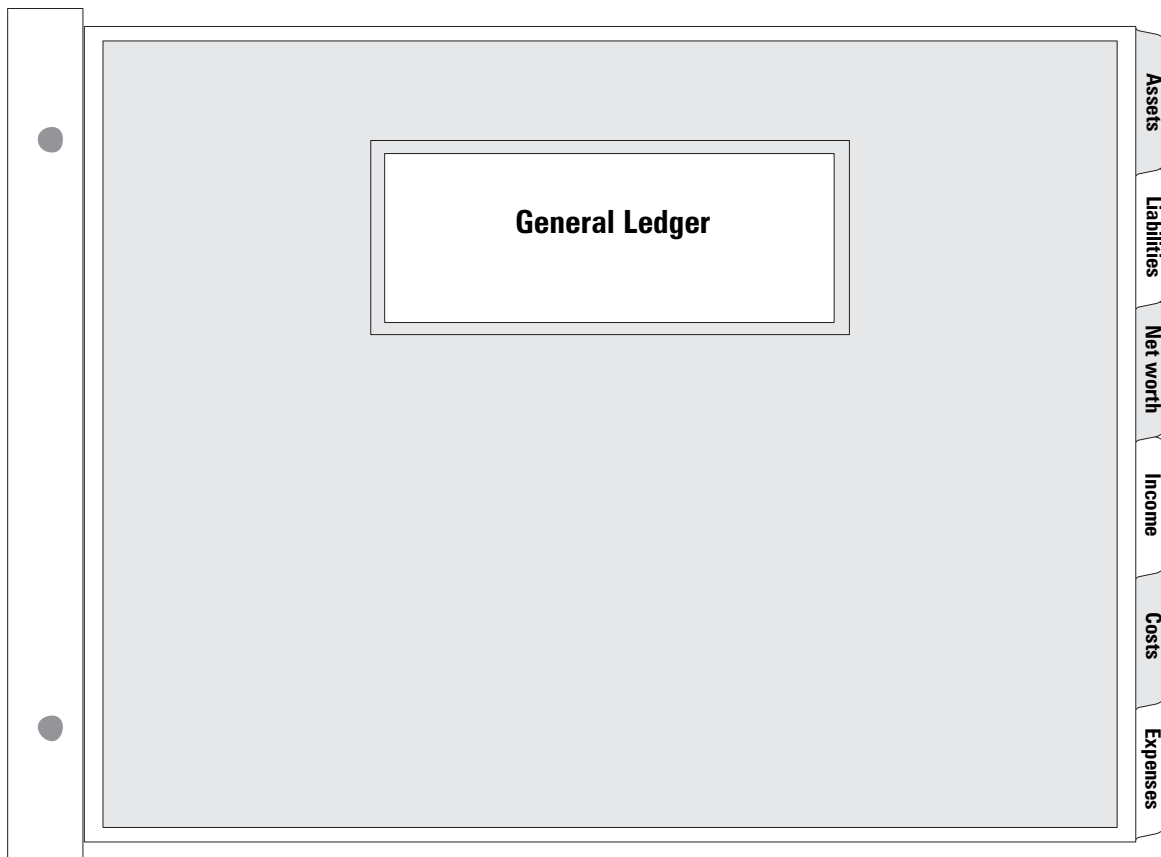


Figure 24-1
Use index tabs in the general ledger

standard procedure for posting the general ledger is to cross-reference each item with a check mark. Each ledger page also includes a posting reference. As you post each entry from the source document (check register, income journal, etc.) to the general ledger, place a check mark (✓) in the source document. Thus you know that all entries from that document have been made to the ledger. At the same time the general ledger shows a reference back to the source document in a column labeled “posting reference.” The following posting references are similar to those in common use.

- CR-0107 (Cash receipts journal, page 7, 2001)
- CD-0104 (Cash disbursement journal — or check register — page 4 from 2001)
- J-42 (General journal, page 42)

When you have double-checked the math in the general ledger, place a check in the check mark (✓)

column to verify that, through a given point, the math accuracy has been proven and the general ledger is balanced.

In Figure 24-2, space has been provided on the page for the date, a description of the entry, and the activity (debit or credit) and balance of the account. Each page should be identified with the name, code, and page reference, which identifies the page number within each account, and therefore the page number in the ledger. Show the year on each ledger page, as shown below:

2001
<hr/>
1-31
<hr/>
2-28
<hr/>
✓
<hr/>
3-31

The check mark in this case means “same as above,” to indicate another entry on the same date.

The general ledger is a perpetual record. Pages are not replaced each year but are added instead, so identification by year is as important as by month.

The description column, often left blank, can be used for special notations and reminders pertinent to the account. It's a good idea in some accounts to identify the item in detail so that reversing or similar entries are made in the correct account.

The balance of an account, plus the debits, less the credits, produces a new balance. In a credit balance account, the negative balance forward will be decreased by (positive) debits and increased by (negative) credits. The double-entry system was designed to assure that all entries are made correctly. If they aren't, the general ledger will be out of balance. Of course, if

Any time the general ledger is out of balance, you have to find the error. The first step is to check the source documents. These should be up-to-date and in balance. On the check register, the sum of all distributions (debits) is equal to the reduction of cash (a credit). On the receipts journal, the sum of all sales (credits) is equal to the accounts receivable total (a debit). All cash actually received (credits to accounts receivable) is equal to the increase (debit) in cash. By the same rule, journals must be equal in debits and credits.

Post the entries from the journals and source documents to the general ledger once you determine that they're all in balance. Many errors can occur in the posting procedure itself.

Here are some of the common posting errors:

- **Transposition** Two numerals within a number are reversed. For example, 2,146 is recorded as 2,416. In cases of transposition *the digits in the difference will always add up to nine or a multiple of nine*. In the example the difference this error creates is 270. Two plus seven is nine.
- **Decimal misplacement** A number is recorded with the decimal in the wrong place. For example, 2,146.00 is recorded as 21.46, which is difficult to find without examining every account. But you have a clue about what to look for. This is similar to a transposition. In this case you'd be out of balance by 2,124.54. The digits total 18, and that suggests a transposition. Next, subtract 54 from 100, and look for the answer (46) in the cents column. If you don't find it there, look in the tens column of whole dollar amounts.
- **Debit / credit error** A debit is entered in the credit column, or vice versa. The amount out of balance will be an even number, because this error doubles up the amount of the misplaced entry. To find such errors, divide the out-of-balance amount by two and search for an entry of that amount.
- **Simple math error** An error is made in adding the new balance in the general ledger, or in totaling one of the source documents. The only way to find this is to double-check your arithmetic.

Keeping books in balance isn't always easy. Errors have a way of hiding so well that sometimes only a painful and time-consuming search will find them. But every accounting document can be balanced. Inexperienced bookkeepers often blame the system rather than their own lack of accuracy. If you have an employee who's having problems balancing the books, the best solution is patience and understanding. A motivated bookkeeper will learn quickly from his or her mistakes.

■ The Trial Balance

The next step after posting the general ledger is to test the balance. Because all entries in the double-

entry method consist of equal debits and credits, the *sum* of all accounts in the correctly-maintained general ledger will equal zero.

To test the balance, run a tape of the ending balance for each account in the entire ledger. If the tape does not come out to zero, find and correct all the errors. A second tape should prove the balance by equaling zero. Then prepare a trial balance as explained in Chapter 21. The first two columns of Figure 24-3 are a trial balance from the general ledger, before adjustments. First, isolate the balance sheet accounts (assets, liabilities and net worth) on the top part of the trial balance to get a year-to-date profit or loss total. Total assets less all liabilities and net worth produce a difference. This difference between the total of liabilities and net worth, when subtracted from assets, should represent profit (or loss).

Secondly, isolate the income / cost / expense accounts in the lower part of the trial balance. The difference between the debits and credits in this part of the trial balance should be the same as the profit or loss from the top part. That's because general ledger entries often consist of a debit to an asset account and a credit to an income account, or a debit to an expense account and a credit to an asset account. So many entries are split with either the debit or the credit going to the asset / liability / net worth side and the other entry to the income side of the general ledger. Neither part will balance alone. But in a balanced ledger the differences will be the same in both parts.

Adjusting the Trial Balance

Account balances must be *adjusted* when you prepare financial statements. Record these adjustments only on a worksheet to produce interim statements during the year. But at the close of the year make the adjustment entries in the general ledger itself, as well. The second two columns of figures in the worksheet in Figure 24-3 show the adjustments to the trial balance accounts in the first two columns. The following is an explanation of these adjustments.

- **Inventory adjustments:** The year-end inventory, \$1,600, is reversed out and replaced by the current inventory amount, \$1,900. These adjustments are offset in the *materials purchased* cost account.
- **Depreciation:** The *accumulated depreciation* fixed asset account is increased by a credit of \$440.06. The offsetting debit is to the expense account, *depreciation*.

Trial Balance and Closing Adjustments

For the two-month period ended February 28, 20_____

	Trial Balance		Closing Adjustments		As Adjusted	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash	1,460.18				1,460.18	
Accounts receivable	12,780.00				12,780.00	
Reserve for bad debts		350.00				350.00
Inventory	1,600.00		1,900.00	1,600.00	1,900.00	
Fixed assets	10,811.60				10,811.60	
Accumulated depreciation		3,100.06		440.06		3,540.12
Accounts payable		1,211.60	1,211.60	318.45		318.45
Payroll taxes payable		436.84				436.84
Current note payable		6,600.00				6,600.00
Long-term note payable		900.00				900.00
Net worth		12,750.00				12,750.00
Total	26,651.78	25,348.50	3,111.60	2,358.51	26,951.78	24,895.41
Profit and loss		1,303.28		753.09		2,056.37
Total		26,651.78		3,111.60		26,951.78
Income		10,418.40				10,418.40
Materials purchased	5,216.00		318.45	1,211.60	4,022.85	
Direct labor	1,400.00		1,600.00	1,900.00	1,400.00	
Office salaries	800.00				800.00	
Payroll taxes	204.00				204.00	
Depreciation	440.06		440.06		880.12	
Other expenses	1,055.06				1,055.06	
Total	9,115.12	10,418.40	2,358.51	3,111.60	8,362.03	10,418.40
Profit and loss	1,303.28		753.09		2,056.37	
Total	10,418.40		3,111.60		10,418.40	

Figure 24-3*Trial balance and closing adjustments*

- **Accounts payable:** The amount booked at year-end is reversed. The \$1,211.60 is no longer truly payable, even though the amount is still listed in the general ledger. Actual booking of such entries is often made only once a year. This reversal is replaced by the *current* accounts payable, \$318.45. In this example, both past and current accounts payable are for materials, so the appropriate offsetting entries have been made to the *materials purchased* account in the expense portion of the adjustments.
- **Other:** No other adjustments are listed in this example. In a real situation, there may be numerous other adjusting entries such as coding corrections or bank reconciliation items.

Notice that the debits and credits of the adjusting entries are equal, as they should be. Because the entries are split between the balance sheet accounts and the income accounts, the adjustment to increase income from adjustment entries is \$753.09.

The final two columns represent the adjusted trial balance, in this example, the true current status of MacDonald Construction. Accurate financial statements can now be prepared from this adjusted trial balance.

Document all adjustment entries with notes to show why you made the adjustments. For example, list the vendors and amounts purchased when making up the accounts payable adjustments. Specify what accounting method you used to arrive at the adjusted inventory total.

Balance Sheet

Figure 24-4 shows the balance sheet for MacDonald Construction. The sheet has been prepared from the adjusted trial balance and shows balances as of February 28. All the pertinent

Balance Sheet			
February 28, 20_____			
Current assets:			
Cash		1,460.18	
Accounts receivable	12,780.00		
Less: Reserve for bad debts	(350.00)	12,430.00	
Inventory		1,900.00	
Total current assets			\$15,790.18
Fixed assets:			
Equipment and machinery		10,811.60	
Less: Accumulated depreciation		(3,540.12)	
Net fixed assets			7,271.48
Total assets			<u>\$23,061.66</u>
Current liabilities:			
Accounts payable		318.45	
Payroll taxes payable		436.84	
Current note payable		6,600.00	
Total current liabilities			\$7,355.29
Long-term liability:			
Long-term note payable			900.00
Net worth:			
Retained earnings		12,750.00	
Net income year-to-date		2,056.37	
Total net worth			14,806.37
Total liabilities and net worth			<u>\$23,061.66</u>

Figure 24-4
Balance sheet

information is available in a format designed for analysis. The current ratio is more than the 2 to 1 minimum standard, as can be seen at a glance from the *total current assets* and the *total current liabilities* entries. All other ratios prepared from balance sheet information can be calculated quickly and efficiently from the figures given.

The information presented in the balance sheet can be traced back through the trial balance to the unadjusted totals from the general ledger, to the original entry documents, and back still further to the

duplicate deposit slips, canceled checks, and paid invoices that prove the numbers.

Income Statement

The income statement for MacDonald Construction is shown in Figure 24-5. Here again, all details are available for instant ratio analysis. Net profit is about 20 percent of gross sales, while gross

Income Statement	
For the two months ended February 28, 20_____	
Income	\$10,418.40
Cost of goods sold:	
Inventory 1-1	1,600.00
Materials purchased	4,322.85
Direct labor	1,400.00
Total	7,322.85
Less: Inventory, 2-28	1,900.00
Cost of goods sold	5,422.85
Gross profit	4,995.55
Operating expenses	
Office salaries	800.00
Payroll taxes	204.00
Depreciation	880.12
Other expenses	1,055.06
Total expenses	2,939.18
Net income	\$2,056.37

Figure 24-5
Income statement

profit is slightly less than 50 percent of gross sales. MacDonald should compare these figures to last month's and last year's to check the trend of his profits.

The change in inventories represents a \$300.00 adjustment to the cost of goods sold. Both the beginning inventory (from year-end) and the ending inventory (from the current month) are shown in order to establish the method by which direct costs were computed. Showing both inventories is convenient because it allows MacDonald to see what his average inventory was during the period of the financial statement. Both beginning and ending balances are listed.

The flow of information from the original source documents through the financial statements is summarized in Figure 24-6.

■ Closing the Books

The books are *closed* at the end of each year. This means that the final adjustments are made to update

all accounts and then recorded in the general ledger. Then all income, cost, and expense accounts are closed out. Do this by reversing the balance in each account to leave a zero balance. This must be done at the close of each year to start the new year from scratch.

Since all entries must have offsetting entries, the net amount of profit or loss must be entered in the retained earnings account. Profit increases this account, and loss decreases it. On the balance sheet in Figure 24-4 notice that the net worth section consists of two parts: retained earnings and net income. The net income part represents a year-to-date total, while retained earnings is the *net sum* of all previous years' net profits and losses.

The following net worth accounts are commonly found in the general ledger itself.

- Capital stock accounts (corporations only)
- Partners' equity accounts (partnerships only)
- Partners' draw accounts (partnerships only)
- Retained earnings (corporations only)
- Profit and loss

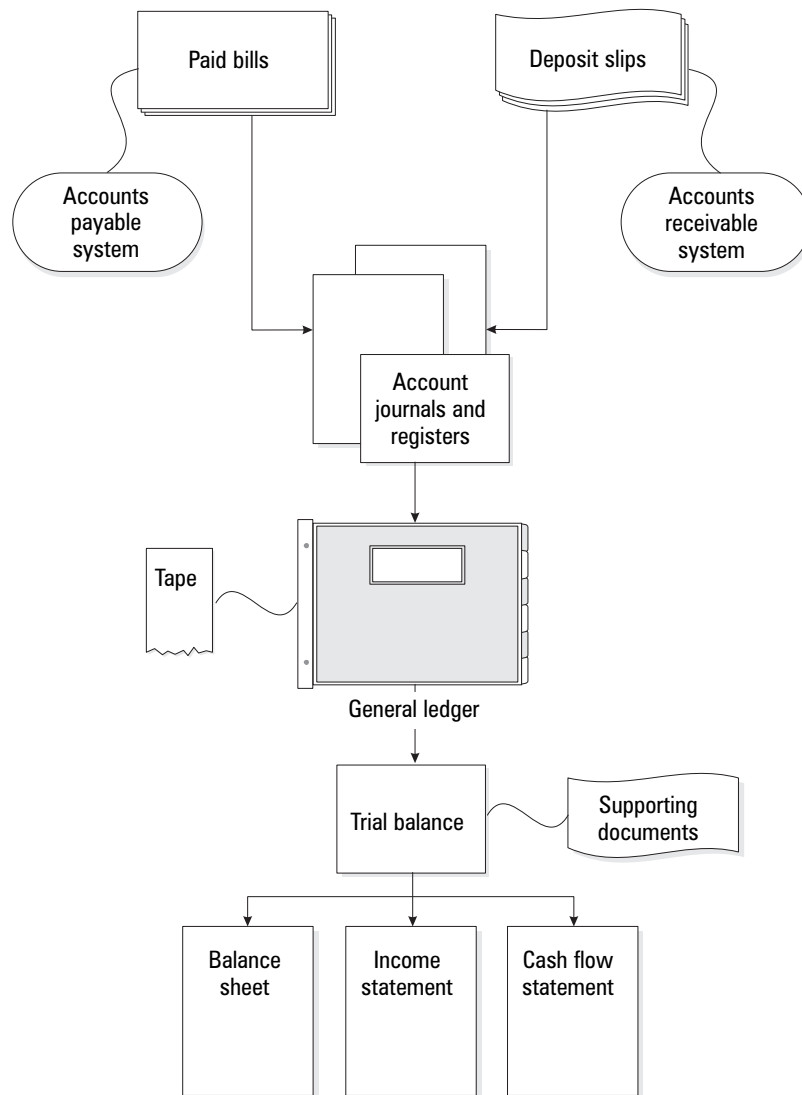


Figure 24-6
Flow of information

Capital stock accounts change only when stockholders' investment balances change.

Partners' equity accounts, or owner's equity accounts for sole proprietorships, receive their share of all profits — otherwise called *retained earnings* — at the close of each year. They are also reduced by the amount of draw each year:

$$\text{Partners' equity} + \text{profit} (- \text{loss}) - \text{draw} = \text{adjusted equity}$$

A retained earnings account, found exclusively on corporation books, is the sum of all prior years'

profits and losses accumulated during the life of the corporation.

A profit and loss account is used to isolate the current year's results. This account is closed out at year-end into one of the other equity accounts described above.

At the beginning of each new year, restore the reversal entries for accounts payable and accounts receivable so the general ledger again agrees with the actual totals in these accounts.

Test Questions:

1. Consistent account coding is important because:

- A. Accountants insist on consistency.
- B. Proper analysis from one period to another requires proper assignment of coding.
- C. You're not allowed to spend too much money in any one expense category.
- D. All of the above.

2. The general ledger is:

- A. A highly summarized record of business transactions.
- B. A collection point of great detail for every transaction.
- C. The original book of entry.
- D. A ledger to capture all of the entries that cannot be classified in one of the more specialized ledgers.

3. The sequence of the general ledger:

- A. Is alphabetical.
- B. Doesn't matter as long as all accounts are listed.
- C. Is income statement accounts first, then balance sheet accounts.
- D. Is balance sheet accounts first, then income statement accounts.

4. In the general ledger, positive-balance accounts are:

- A. Increased by debit entries.
- B. Increased by credit entries.
- C. Increased by either debits or credits.
- D. Generally unchanging except in extraordinary situations.

5. When the general ledger is out of balance, it indicates that:

- A. You need to reconcile your checking account.
- B. Your business is operating at a loss.
- C. Your accountant has not completed his monthly analysis.
- D. An error has been made in posting entries to the ledger.

6. Adjustments made after the trial balance:

- A. May include changes for inventory levels, depreciation, and accounts payable.
- B. Are always listed in the footnotes.
- C. Should not be made, since the trial balance is the last step before financial statements are drawn.
- D. May include last-minute changes to reduce tax liabilities.

7. Closing entries are always:

- A. Made up of credits only, since all debit entries were already entered in the ledger.
- B. Made up of debits and credits only, with no particular need to have them balance.
- C. Equal, so that you maintain the balance of the general ledger and trial balance.
- D. Made only in the subsidiary journals, so that they don't show up in the general ledger.

8. Changes made to inventory are:

- A. Never entered more than once per year.
- B. Made to reflect changes in physical count, and serve to adjust direct costs.
- C. One-sided entries only, with the offsetting change affecting profit and loss.
- D. Never made by journal entry, unless you have a theft or casualty loss in your warehouse.

9. Closing the books means:

- A. Finishing the month's posting.
- B. Finishing posting for the year and finally balancing all accounts.
- C. Zeroing out every income statement account and making a net entry for the difference to the profit and loss account.
- D. Further entries can only be made by you or your accountant.

10. The capital stock account is found in:

- A. The books of corporations only.
- B. The net worth section of all businesses, including corporations, partnerships, and sole proprietorships.
- C. The income statement accounts, where profits and losses occur.
- D. The asset section, where the owners' equity is listed as a long-term asset.

11. If account coding has been inconsistent:

- A. You need to make corrections in the proper month only.
- B. You need to make corrections and then improve account definitions.
- C. It indicates that your bookkeeper is not doing his/her job correctly.
- D. Your system needs upgrading.

12. The abbreviated posting reference "CR-0109" means:

- A. First entry, 9th page.
- B. Year 2001, 9th month.
- C. First page, 9th entry.
- D. Year 2001, page 9.

13. A general ledger page contains:

- A. All of the details of transactions occurring during the month.
- B. Entries only if no subsidiary ledgers are needed.
- C. Summary entries only for each month.
- D. Entries that don't fit properly into specialized journals.

14. The purpose of the trial balance is to:

- A. Summarize the ledger balances and make closing adjustments.
- B. Look for ways to improve your numbers and/or reduce taxes.
- C. Prepare statements broken down by job.
- D. Check if the estimated balance is close to the actual balance when the books are closed at year-end.

15. The Income Statement shows:

- A. Incoming cash summaries only.
- B. Job breakdowns to gross profit level, without any general expenses.
- C. Cash flow for your operation.
- D. Income, costs, expenses, and profit for your operation.

Comparative Period Statements

A ratio means more when it's compared to similar ratios from past periods. Similarly, a financial statement becomes more valuable when you can compare it to earlier statements to spot overall trends. To do this, make up a *comparative period statement*, which lets you see progress in your financial condition from month to month or from year to year.

Comparative period statements are effective only when all statements are expressed on the same accounting basis. Coding procedures, account descriptions, statement formats, and valuation methods must be the same on each statement. If you've changed formats or accounting methods, you must re-express on the current basis the statements prior to the change. Then you can include statements in your comparison from both before and after the change. Income statements, especially, must be figured the same way consistently from period to period. Hold to one accounting method: either percentage of completion or completed contract, or a consistent combination of the two. Otherwise, your income comparison will be meaningless.

■ Comparative Balance Sheets

A comparative balance sheet lets you analyze on one sheet of paper the trend of your financial condition between the time you take one balance and the next one. Figure 25-1 shows a balance sheet comparing the two months following the close of one year and the two months following the close of the previous one. You might prepare this statement for a three-year period if significant growth is expected or has occurred recently.

MacDonald has drawn up his comparative balance sheet in February, giving him two month's operation after the first of the year to allow for full seasonal variations in his comparison. He has also made sure that the

Balance Sheet		
February 28, 20X2 and 20X1		
	2-28-20X2	2-28-20X1
Current assets:		
Cash	\$1460.18	\$2,260.00
Accounts receivable	12,780.00	9,485.80
Less: Reserve for bad debts	(350.00)	(125.00)
Inventory	1,900.00	1,200.00
Total current assets	<u>\$15,790.18</u>	<u>\$12,820.80</u>
Fixed assets:		
Equipment and machinery	\$10,811.60	\$7,811.60
Less: Accumulated depreciation	(3,540.12)	(223.65)
Net fixed assets	<u>\$7,271.48</u>	<u>\$7,587.95</u>
Total assets	<u><u>\$23,061.66</u></u>	<u><u>\$20,408.75</u></u>
Current liabilities:		
Accounts payable	\$318.45	\$216.44
Payroll taxes payable	436.84	-0-
Current note payable	6,600.00	5,316.00
Total current liabilities	<u>\$7,355.29</u>	<u>\$5,532.44</u>
Long-term liability:		
Long-term note payable	<u>\$900.00</u>	<u>\$7,400.00</u>
Net worth:		
Retained earnings	\$12,750.00	\$6,846.00
Net income year-to-date	2,056.37	630.31
Total net worth	<u>\$14,806.37</u>	<u>\$7,476.31</u>
Total liabilities and net worth	<u><u>\$23,061.66</u></u>	<u><u>\$20,408.75</u></u>

Figure 25-1
Balance sheet

compared months are the same in each year; using different months invalidates the comparison.

The current ratio in the figure is better than 2 to 1 in both periods. MacDonald financial relationships are basically well-controlled. Current debts are payable from current assets in both years. There has been a large increase in the amount of depreciation; this indicates that new equipment purchases are subject to larger-than-average depreciation in the early portion of the equipment's life. This affects income,

of course, but *not* cash flow, because depreciation is not a cash exchange.

A large long-term note, previously \$7,400, is now only \$900, raising the ratio of capital to liabilities and lowering the amount of outside funding. In the earlier period, assets were funded by nearly \$13,000 in debts and only \$7,000 in capital. In the later period, assets are funded only \$8,000 by debts and \$15,000 by capital. This shows that the owners have allowed their profits

Income Statement		
For the two months ended February 28, 20X2 and 20X1		
	2-28-20X2	2-28-20X1
Income	\$10,418.40	\$6,250.00
Cost of goods sold:		
Inventory 2-28	\$1,600.00	\$1,200.00
Materials purchased	4,322.85	3,460.18
Direct labor	1,400.00	600.00
Total	7,322.85	5,260.18
Less: Inventory, 1-1	1,900.00	1,840.00
Cost of goods sold	\$5,422.85	3,420.18
Gross profit	\$4,995.55	2,829.82
Operating expenses		
Office salaries	\$800.00	300.00
Payroll taxes	204.00	42.00
Depreciation	880.12	64.00
Other expenses	1,055.06	1,793.51
Total expenses	\$2,939.18	2,199.51
Net income	\$2,056.37	630.31

Figure 25-2
Income statement

to remain in the business, or that additional capital has been fed into the company. Either way, the later statement appears much healthier.

Receivables make up the major increase in current assets. Inventories haven't increased much in the second period and cash is lower. The owners should be able to establish that their receivables are collectible and that the reserve for bad debts is realistic. If the control policies in those areas are sound, the \$3,000 increase in receivables doesn't seem unreasonable.

■ Comparative Income Statements

MacDonald Construction's comparative income statement in Figure 25-2 provides the same information as its annual income statement, in the same format, but for two years. The information on the

comparative statement was gathered at the end of the same months for those years, just like the comparative balance statement.

MacDonald's business volume increased tremendously during the year. Sales have increased by more than 65 percent. Yet gross profit has increased from 45 percent in the previous period to 48 percent in the current period. This indicates that controls have been enforced on direct costs, even with a large increase in volume. Net income has doubled from 10 percent to 20 percent.

General expenses have been summarized in Figure 25-2 in four categories — office salaries, payroll taxes, depreciation, and other expenses. This was done to keep comparative analysis to a minimum. You may wish to list every account in detail. But it's easy to get lost in a long column of numbers which aren't very significant individually. By summarizing you can zero in on those accounts you want to keep a close eye on.

Comparative Percentage Income Statement		
For the two months ended February 28, 20x2 and 20X1		
	2-28-20X2	2-28-20X1
Income	100.0	100.0
Cost of goods sold:		
Inventory 1-1	15.4	19.2
Materials purchased	41.5	55.4
Direct labor	13.4	9.6
Total	70.3	84.2
Less: Inventory, 2-28	18.2	29.5
Cost of goods sold	52.1	54.7
Gross profit	47.9	45.3
Operating expenses		
Office salaries	7.7	4.8
Payroll taxes	2.0	0.7
Depreciation	8.4	1.0
Other expenses	10.1	28.7
Total expenses	28.2	35.2
Net income	19.7	10.1

Figure 25-3
Comparative percentage income statement

Builders often use an even more summarized format. The income statement is detailed using only the following categories: income, direct costs, gross profit, operating expenses, and net profit. These are the main sections of the income accounts in the general ledger. This format may be practical in some applications, but it doesn't let you use the statements for detailed analysis and control.

Because they're calculated for just two-month periods, comparative income statements are only indicators of future activity. Net profit to sales may change significantly beyond the statement period. But you can use other forecasting techniques and ratios derived from the statement (like net to gross profit percentage) to help you estimate your income for the rest of the year.

Compare last year's two-month net to gross profit figures with those from the annual statement at the end of last year. This shows how accurate the February income figures are at estimating for the rest

of the year. You can then assume that this year's February figures have the same accuracy, give or take differences you expect in the coming year which may affect their accuracy.

Another comparative income analysis format is shown in Figure 25-3. Here, the dollar figures from the previous comparative income statement have been converted to percentages of gross income or sales. The most striking comparison in this statement is the change in net income from 10 percent to nearly 20 percent. But this is only a two-month statement. You shouldn't consider these figures too significant, except as they indicate a trend, until all outside factors have been weighed.

MacDonald's comparative percentage income statement in Figure 25-3 shows clearly that *other expenses* should be broken out still further. This category comprises such a large portion of the total that the accounts making it up should be shown in more detail.

Monthly Income Statements

For the year ended December 31, 20_____

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Income	3318	2932	1766	3180	3366	3492	3440	6118	5766	4180	4764	5518	47840
Beginning inventory	1760	1200	1375	1480	1492	1605	1866	1840	1756	1892	1910	1900	1900
Purchases	1682	1778	905	1060	1300	1210	1360	2418	2140	2004	1742	1810	19409
Direct labor	300	300	300	300	300	450	450	800	800	800	700	700	6200
Total	3742	3278	2580	2840	3092	3265	3676	5058	4696	4696	4352	4410	27509
Less: Ending inventory	1840	1760	1200	1375	1480	1492	1605	1866	1840	1756	1892	1910	1840
Cost of sales	1902	1518	1380	1465	1612	1773	2071	3192	2856	2940	2460	2500	25669
Gross profit	1416	1414	386	1715	1754	1719	1369	2926	2910	1240	2304	3018	22171
Salaries	150	150	150	150	150	150	150	400	400	400	400	400	3050
Payroll taxes	21	21	21	21	21	21	21	83	83	83	32	32	460
Depreciation	32	32	32	32	32	440	440	440	440	440	440	440	3240
Other	963	831	342	425	480	510	543	622	601	549	562	515	6943
Total expenses	1166	1034	545	628	683	1121	1154	1545	1524	1472	1434	1387	13693
Net income	250	380	(159)	1087	1071	598	215	1381	1386	(232)	870	1631	8478

Figure 25-4
Monthly income statements

Total expenses decreased from 35.2 percent of sales to 28.2 percent. MacDonald seems to be controlling his sales expenses and overhead with increased volume. But without better detail of expenses he can't know how well he's actually doing. He may be able to make further expense cuts, but only if he can locate the expense areas that need policing.

percent of the year's sales were accounted for in only the last five months. This same five-month period accounted for 59 percent of the year's profits.

Also note that the inventory figure is relatively stable throughout the year. This indicates that MacDonald maintains a stable level of materials on hand despite the rise in income.

Monthly Income Statements

A complete 12-month income history, as in Figure 25-4, helps plan future cash flow and expense budgets. This one-page summary can be prepared easily from monthly general ledger totals. Or summarize the data from monthly financial statements. Add each month's results to the worksheet as you gather them at the end of the month throughout the year, checking the results with your expectations and past results. You can see trends in expenses at a glance, and plot the percentages of gross profit by month through the year.

Note the seasonal changes in volume in MacDonald's monthly income statement. Fifty-five

Using Comparative Data

Follow up on your comparative analyses by taking a course of action. First, compare actual results to the budgets you established before the current period began. This lets you see how your original plan has turned out.

You should have established a high expectation and a low expectation. Do the results fall between these? Or are they below or above that range? Some type of control is needed if the plan was prepared

realistically and the results still came in below budget. The comparative statement should show which current conditions are on a downward trend from last period. Then look at the statement along with the budget. This should show you where the actual results fell short of budgeted expectations. Decide what controls you need to raise the conditions with the downward trend.

If the results were better than the high expectation, you probably set your sights too low. Or perhaps something unusual occurred in the current period that you can't count on to repeat itself. Study the comparative statement carefully and define exactly what went right. How can this trend be repeated? Choose a future course of action that encourages the profitable trend.

Other Comparative Applications

Comparative analysis has applications throughout your books and records. Comparative cash flow statements can be prepared to discover increases or decreases in cash efficiency. Or you can compare expense budgets from one year to the next to judge your estimating ability. And a comparison of contract estimates to total actual contract costs helps in bidding and controlling current and future jobs.

You're constantly making comparative studies without realizing it. For example, you compare similar contracts for expense, inventories, manpower and the like. You also compare your operation to other construction businesses. It may not be possible to compare your financial statements with another builder's. But you may regularly check the similarities in two operations to get a competitive edge. For instance, you may have more modern equipment, and better office and retail space than another builder you know, so you can afford to go after more business. With more equipment and machinery at your disposal, you're in a more competitive position.

An important type of comparison within your own operation involves labor and payroll. You can quickly prepare a payroll cost accounting and by-the-job summary when each payroll is made up. Compare current payroll to:

- 1) Previous payrolls on the same project
- 2) Payrolls on other projects
- 3) Progress billings and work in progress

You also can't help but compare your workers to one another. Some people turn out to be more valuable, since they're more efficient, more dependable, and able to produce a better product faster.

The comparative analyses you perform from the books and records are only a small part of the total comparative function involved in running a construction business. But these comparisons are the only firm basis you have on which to make your business judgments. Knowing how to compare factors — and knowing which of the many factors in your operation to choose from — is a daily practical skill you need to direct your operation.

Comparisons with Budgets

You may want to compare actual results to budget expectations. This type of comparative statement has three columns, each for a different set of figures:

- 1) Actual results
- 2) Budgeted amounts
- 3) Variance from budgeted amounts, over or under

This kind of statement is often misused, since its purpose is often overlooked. The statement lets you see in *summary* format how well you've budgeted and what kinds of controls you need to bring accounts back into line. But too often, the statement is drawn up complete with pages of narrative explanation to document every variance from the budget. This is a time-consuming but thorough job requiring a lot of research for each answer.

Too often, the research is wasted because it doesn't translate into action to control conditions or reverse trends. It's almost as though the variance is acceptable as long as everyone knows the reason for it. Use this type of comparative statement most effectively to stress *overall* changes from budgeted amounts. You only gain with this format if you look for the variances and bring them back into line, rather than take comfort in good documentation.

Budgets are made to set a standard. So they should be used as tools of enforcement. If the standard is realistic, the budget is controllable — but only if general areas of variance are controlled and brought into line.

Some builders pay close attention to unfavorable variances (budget overruns) but ignore favorable variances, assuming that they're money ahead by over-budgeting. But be cautious of favorable variances.

- 1) If you're over-budgeting, your cash flow projections are too conservative and you won't be able to capitalize on available cash since there's no plan for cash utilization.
- 2) Favorable variances can result merely from delayed payments. Make certain that you understand why the favorable variance occurs. If the favorable trend were to reverse in the future, would funds be available to pay the bills? Budget analysis includes being able to interpret data and make decisions with an awareness of the practical consequences.

Keep in mind that all comparative data is much more valuable than data on single-period statements.

While two statements can be reviewed separately and some information gained from each of them, your most significant conclusions by far come from comparing trends and conditions.

A word of caution when preparing comparative statements: First make certain that your information is truly comparative. This means ensuring that you're looking at periods of the same length — 12-month years as compared to short years, for example. It may also mean making some adjustments if you've put some entries in different classifications from those of the previous year. Finally, take out any extraordinary items, such as write-offs of inventory, exceptionally high bad debts, or a heavy casualty loss.

Test Questions:

1. A comparative statement shows:

- A. Results from one company to another.
- B. Actual to budgeted results.
- C. Results from one period or date, to another period or date.
- D. Varying outcomes depending on classification of transactions as assets or current expenses.

2. A comparative balance sheet always reflects results:

- A. At two different dates.
- B. For two different periods of time.
- C. For the company compared to industry averages.
- D. With both dollar amounts and percentages for each account.

3. A comparative income statement always shows:

- A. What should have occurred if the budget had come out correctly.
- B. The current year plus a pro forma for the coming year.
- C. Results from the current and the past periods.
- D. Results as of two different dates.

4. An income statement can be prepared:

- A. With highly summarized totals, supported by attached supplementary schedules showing greater detail.
- B. With all of the details on the one report.
- C. With percentages of sales for each line shown alongside the amounts or, in some cases, in place of the amounts for analytical purposes.
- D. All of the above.

5. Income statements for relatively short periods of time are:

- A. Good indicators of what to expect for the rest of the year, since statistically small samples are dependable.
- B. Not good indicators of the future, because many factors, such as seasonal variations, can make short-period statements unreliable.
- C. Good indicators of what to expect for the rest of the year, if you've done your adjusting accrual entries properly.
- D. Not good indicators of the future because you'll probably change all of your numbers before the year is done.

6. A 12-month worksheet showing every month's results is useful for:

- A. Comparing results from year to year and from month to month, to look for unusual changes.
- B. Completing budgets.
- C. Spotting favorable as well as unfavorable trends.
- D. All of the above.

7. Comparative periods should be:

- A. Identical in terms of time so that the comparison is valid.
- B. Varied to include seasonal fluctuations.
- C. Used only if your accountant thinks there may be some value in such comparisons.
- D. Only used to compare one month to another in the same year.

8. Comparisons are:

- A. Commonplace; you use comparative data all the time and to make every decision.
- B. Rarely used to make business decisions.
- C. Dangerous, because so many variables make any conclusions you draw highly suspect.
- D. The only dependable way to do budgeting, since the past is always a fair indicator of what will happen in the future.

9. When comparing actual results to budget:

- A. Always adjust your budgeted figures to the actual outcome.
- B. Subtract one from the other to isolate the variance over or under the budget.
- C. Be prepared to develop journal entries to bring actual results in balance with the budget.
- D. Do a completely revised budget whenever your variance exceeds 5 percent.

10. Favorable variances are:

- A. Good news, so you don't need to take any action if you find them.
- B. Good news, but require a completely revised budget when they're 5 percent or more above the budget.
- C. Serious if large, because they may affect cash flow and other planning.
- D. Bad news, indicating that you're really losing money even though the books show profits.

11. Comparative statements are useful for ratio analysis because:

- A. The ratio should show up on the comparative statement.
- B. Such statements compare the dollar amounts to the ratios.
- C. Ratios are most useful when comparing results from one period to the next.
- D. None of the above.

12. A change in accounting methods:

- A. Makes comparative statements moot.
- B. Requires restatement so that both years are truly comparable.
- C. Does not affect the comparative statement.
- D. Is not allowed under federal tax law.

13. To make comparative statements meaningful, you should express outcome using:

- A. Percentage-of-completion accounting only.
- B. Completion contract accounting only.
- C. Only cash-basis accounting.
- D. The same type of accounting, or a consistent combination of percentage-of-completion and completion contract accounting, for the years being compared.

14. When preparing a comparative income statement, beginning inventory:

- A. Is the ending inventory for the previous month.
- B. Is the same as ending inventory for the previous year.
- C. Does not change.
- D. Can be used only if you perform a physical count.

15. A "Percentage Income Statement" is:

- A. One in which some of the dollar amounts are estimated based on a percentage of sales in the previous period.
- B. A statement that's prepared in greater detail than the monthly statement.
- C. One showing results in percentage of sales rather than in dollar amounts.
- D. Used to analyze income statement accounts as a percentage of certain balance sheet accounts.

Restatements by Accounting Methods

You maintain your books using one of several accounting methods. Each method has its own advantages and disadvantages and presents data in a different way. Income, costs and expenses are treated similarly with each method.

Percentage-of-completion accounting requires that all booked items reflect the degree of job completion. This means that items may be either accrued or deferred to bring the books into line with job status.

Completed-contract accounting requires that all income, costs and expenses be kept out of the income statement until a job is finished. This accounting method assumes that calculating any percentage of completion is at best an estimate.

Because the two methods are so different from each other, their resulting income statements will be different. Percentage-of-completion accounting gives you a better idea of your true income status, since it provides current information. But keeping records for completed-contract accounting is easier in many ways.

Sometimes the most practical way to keep the books is to use a combination of the two methods. Maintain percentage-of-completion records for long-term contracts and completed-contract records for short-term contracts of less than thirty days.

■ The Restated Income Statement

Analyze your financial statements occasionally by examining results using both methods. That way you can judge profits realistically by seeing how well you're doing when some of your profits are deferred. This requires that you prepare a *restated income statement*. First, produce an income statement entirely by one of the two methods. This sets up one of the bases for

Restated Income Statement

For the four month period ended April 30, 20____

	Percentage of Completion	Less: Uncompleted	Plus: Contracts Completed	Completed Contracts
Income	\$286,400	\$210,680	\$184,010	\$259,730
Cost of good sold:				
Inventory 4-30	10,416	-0-	-0-	10,416
Purchases	132,680	124,441	109,616	117,855
Subcontractors	13,000	13,000	9,000	9,000
Direct labor	44,500	37,650	27,600	34,450
Total	200,596	175,091	146,216	171,721
Less: Inventory 1-1	18,600	-0-	-0-	18,600
Total costs	181,996	175,091	146,216	153,121
Gross profit	104,404	35,589	37,794	106,609
Operating expenses	77,380	12,402	15,980	80,958
Net profit	27,024	23,187	21,814	25,651

Figure 26-1*Restated income statement*

reporting. Then make the adjustments to arrive at results by the second method.

Figure 26-1 is a restated income statement for Beacon Construction Company. Beacon uses the percentage-of-completion method and has restated to the completed-contract method. The following steps must be taken when you restate in this way. Beginning with the percentage-of-completion column:

- 1) Remove uncompleted contracts and all related costs and expenses from the percentage-of-completion figure.
- 2) Add contracts that were completed in previous periods and previously reported as percentage-of-completion contracts. You are adding the parts of those jobs that have been included in prior accounting periods.

The second adjustment above is difficult to arrive at in some circumstances, depending on how accurately you have kept your books. First, determine which contracts are completed in the current period. Then find out how much income, cost, and expense were booked in previous periods for those contracts.

Note that the following factors will distort the restatement somewhat:

- Any interim adjustment to the treatment of accounts. For example, if you decide in the middle of the month that some large payroll accounts should be direct costs, but were previously classified as general expenses, then you should expect to see a distortion between Cost of Goods Sold and General Expenses.
- Major changes in receivable balances. For example, you might have a particularly large number of sales in the current month, but payments weren't received. In this case, your sales, costs, and profit could be impressive, but all of that profit is tied up in significantly larger Accounts Receivable. Ironically, it's possible to show a nice profit and still be hurting for cash. In these situations, you might have to pay suppliers and your employees to work on a job, while no cash is coming in. Of course, if payment is made in the following month, you have the reverse situation — a nice cash flow, reduced Accounts Receivable, but no sales, costs or profit shown on your income statement.

- Large changes in inventory. For example, you might build up your inventory anticipating an upcoming busy season. Your income statement will show a lot of money being paid for materials, offset by increased ending inventory. The net effect doesn't matter; but comparisons from one period to another must account for the seasonal variable. In contrast, you might be letting a built-up inventory run down. In this case, the reduction in your material costs are offset by lower inventory levels, so the net effect is zero. However, your job cost records need to reflect material costs coming out of your inventory.

Point out these changes in the restatement presentation, or it will appear that one or the other method is not representative.

You can't use the restated income statement as a direct comparison document. Total costs and operating expenses are out of proportion to relative total income. And you can't tell from the statement how many months or years are involved in recapturing old completed-contract basis items. Your controls may have improved significantly in the past year, or prices may have changed dramatically. But the statement contains no job schedule or any way of keying income to the calendar to allow for comparative analysis.

Restated income statements are most valuable as supporting documents when you're trying to get credit or demonstrate solvency to lenders. Being able to produce a statement that compares results by different accounting methods may show the lender your willingness to cooperate. Additionally, you can tell from a restated income statement how your tax results would differ under another accounting method.

■ Cash Accounting

Both accounting methods discussed above are accrual methods. This means that some items (such as accounts receivable, accounts payable, and accrued taxes) are included in balance sheets to show profit and loss even though cash has not changed hands.

The cash accounting method is also acceptable for income tax purposes. In this method, no funds are assigned to accounts and reported as profit or loss until cash changes hands. This is an easy way to keep books, because only cash exchanges are reported. In other words, all bank deposits are equal to income and all checks are equal to expenses, costs, and other payments (such as equipment purchases and note payments). Any funds kept out of the checking account

would have to be included as income or expense as well.

The big disadvantage of the cash method is that it is far from accurate reporting. Accounts receivable are truly income accounts, and accounts payable are truly costs and expenses. Reporting on a cash basis in a credit-based society just isn't realistic. If you're interested in producing accurate reports for lenders and tax records, and having accurate information for your own cost accounting and analysis, you must use the accrual method.

Figure 26-2 is a comparative balance sheet that shows the results of both cash basis and accrual basis accounting. It clearly shows the inadequacy of the cash system. The comparison is for a single month. The cash basis statement doesn't reflect receivables, so accounts receivable and retainage are removed from the cash side of the comparison. Income is reduced by the same amount.

Prepaid insurance is removed from the accrual statement as well, and the insurance expense is increased by that amount. In the cash accounting method, expenses are booked when the check is written, regardless of the period of coverage.

Accrued contract income, representing the portion of percentage-of-completion income not yet billed, can't be reflected on a cash basis statement, so the \$19,460 asset is removed. Income is reduced accordingly.

Accounts payable is removed completely, and material purchases are decreased by the same amount. Taxes payable are also moved out, and general expenses are decreased correspondingly.

Deferred contract income (representing either overbilled percentage-of-completion income or the total of uncompleted contracts for the completed-contract income) must also be removed. This increases income by the same amount.

The cash-basis results show that Beacon has no reliable information upon which to draw conclusions. None of the standard ratios produce true relationships between accounts. The cash basis statement is nearly useless to the builder who wants sound financial information to make informed business decisions. The effect on Beacon's reported income from using cash basis accounting is shown in Figure 26-3. Income decreases nearly \$16,000, while costs decrease only \$10,000. Expenses increase more than \$1,000 and it shows a much lower net profit. You must rely on accrual accounting to get a true picture of your performance.

Comparative Accounting Balance Sheet

April 30, 20_____

	Accrual Basis	Cash Basis
Current assets:	1,201	1,201
Cash in bank	16,204	-0-
Accounts receivable	1,600	-0-
Retainages	10,416	10,416
Inventory	29,421	11,617
Total current assets		
Fixed assets:		
Furniture and equipment	57,000	57,000
Less: Accumulated depreciation	(2,945)	(2,945)
Total fixed assets	54,055	54,055
Other assets:		
Prepaid insurance	1,900	-0-
Accrued contract income	19,460	-0-
Total other assets	21,360	-0-
Total assets	104,836	65,672
Current liabilities		
Accounts payable	10,380	-0-
Taxes payable	451	-0-
Current notes payable	3,600	3,600
Total current liabilities	14,431	3,600
Long-term liabilities:	7,200	7,200
Long-term note payable		
Other liabilities:		
Deferred contract income	21,630	-0-
Total liabilities	43,261	10,800
Net worth		
Retained earnings	34,551	34,551
Net income, current year	27,024	20,321
Total net worth	61,575	54,872
Total liabilities and net worth	104,836	65,672

Figure 26-2*Comparative accounting balance sheet***Comparative Accounting Income Statement**

For the four months ended April 30, 20_____

	Accrual Basis	Cash Basis
Income	\$286,400	\$270,766
Cost of goods sold:		
Inventory 1-1	10,416	10,416
Purchases	132,680	122,300
Subcontractors	13,000	13,000
Direct labor	44,500	44,500
Total	200,596	190,216
Less: Inventory 4-30	18,600	18,600
Total costs	181,996	171,616
Gross profit	104,404	99,150
Operating expenses	77,380	78,829
Net profit	27,024	20,321

Figure 26-3*Comparative accounting income statement***A Practical Approach**

Preparing and entering accruals into the books monthly, then reversing them the next month, plus the adjustments you have to make to accurately reflect percentage-of-completion accounting, is much work. There needs to be a practical solution, especially in an operation using both percentage-of-completion and completed contract methods. Obviously, these are treated differently, so you have to make accrual adjustments and decide how to treat sales and costs by each job. Percentage-of-completion jobs are adjusted periodically to reflect the right accruals and deferrals. And completed contract transactions are taken out of the books altogether until the job is finished. That's a lot of work and takes much time at month end, even if you're using an automated accounting system.

There's an easier way. You can maintain your books from one month to the next on a cash basis. That means you only make an entry in the books from your sales journal and from your disbursements journal. All other records are maintained in subsidiary systems. The major journals will be for Accounts Receivable and Job Cost Records.

Your subsidiary records aren't part of the books, so your month-end bookkeeping chore involves several steps: First, you need to close and balance your books. This involves summarizing the Sales Journal and the Disbursements Journal, then making entries to the General Ledger. If you use an automated system, it's usually in balance perpetually, because the entries you make have to balance or the system won't accept them. If you're doing your bookkeeping by hand, you need to add and check your math the old-fashioned way. The point is, you don't have to do any journal entries to accrue or defer sales or costs.

Besides the bookkeeping system, you need to maintain your subsidiary records. You need to know what to bill customers and how to account for their payments, so you'll have to maintain an Accounts Receivable and billing system daily. You'll need to maintain the Job Cost records — both as part of the billing system itself, and to track your forecast and schedule for each job.

For the preparation of financial statements, all adjustments can be made on a worksheet. If your accountant prepares your statements, make these adjustments by examining your records at month-end. Your accountant needs to modify what's reported to account for several items:

- Accruals and deferrals for percentage-of-completion jobs
- Removal of uncompleted jobs under the completed contract method
- Accruals for accounts receivable and accounts payable
- Any required adjustments for discovered errors in your books

- Adjustments for bank charges and other timing problems in your books
- Adjustments for depreciation

You gain two advantages under this system. First, your bookkeeping remains simple and straightforward; second, your monthly financial statements are accurate and show a realistic status for your operation.

Keeping your books simple is important to allow time, for preparing timely budget variance reports, or posting job cost records so that bills go out promptly. If your bookkeeper is occupied for several days preparing journal entries, it delays everything else. All the adjusting journal entries placed into the books at the end of the month have to be reversed the next month. Try to avoid such entries to keep your books simple and easy-to-follow, so you can find what you need.

Having accurate financial statements is equally important. But the books and records don't have to be posted in order to achieve this. The monthly trial balance format can be used effectively to make off-book entries to allow for accruals and deferrals without taking a lot of time to enter journals into the books.

Remember the theory of closing the books and making adjusting entries isn't often a practical real-life system to use. In a relatively simple operation that adjusts each month for a few accounts receivable and accounts payable, entering journals in the books is easy and doesn't cause problems. Most builders, however, have more complex operations and monthly adjustments can become very complicated. The more complicated, the more you might need help from your accountant. Set a standard for yourself and minimize the entries you actually have to make in the books, especially those that will have to be reversed every month.

Test Questions:

1. Books kept under the percentage-of-completion method of accounting show:

- A. Only a portion of income, but all costs and expenses for each job.
- B. All income, but only a portion of all costs and expenses for each job.
- C. Only a portion of income, costs, and expenses for each job.
- D. Nothing for any job until it is completed.

2. Books kept under the completed-contract method of accounting show:

- A. Only a portion of income, but all costs and expenses for each job.
- B. All income, but only a portion of all costs and expenses for each job.
- C. Only a portion of income, costs, and expenses for each job.
- D. Nothing for any job until it is completed.

3. A restatement by accounting method involves:

- A. Requesting permission from the IRS to revise the method you use for keeping books.
- B. Keeping two sets of books.
- C. Calculating percentage-of-completion for records kept under the completed-contract method; or vice versa.
- D. Making a lot of accrual entries.

4. Restatements by accounting methods are done at the end of the year because:

- A. The law requires annual adjustments for tax purposes.
- B. It simplifies methods of keeping the books from month to month.
- C. Taxes can be reduced depending on which method you pick.
- D. You can't know in advance in which year a specific job will finish.

5. The cash accounting method is:

- A. The easiest method for keeping books, but among the least accurate.
- B. Not an acceptable method of keeping books.
- C. Difficult to operate because of the volume of accruals and reversals required.
- D. Only worthwhile when you are always paid by customers in cash at the time work is completed.

6. Under the cash accounting method, transactions are posted:

- A. When work is contracted.
- B. When money exchanges hands.
- C. When income is earned and expenses are incurred, even if money isn't exchanged.
- D. At the end of the month only.

7. Under the cash accounting method, prepaid insurance is:

- A. Deducted only during the period to which it applies.
- B. Deducted all at once when paid for.
- C. Amortized over three years.
- D. Not deductible at all.

8. Under the cash accounting method, accounts receivable are:

- A. Treated as income when they become due.
- B. Taxed on the due date, even if money hasn't been received by then.
- C. Treated as income only when collected.
- D. Taxed when incurred, even if the customer never pays.

9. Under the cash method of accounting:

- A. There are no balances in the accounts payable account.
- B. Income isn't taxed until your customers pay, even if that takes a year.
- C. No accrual entries are made.
- D. All of the above.

10. Analysis under the cash method is:

- A. Much easier because the books aren't complicated with a lot of accrual and reversal entries.
- B. More accurate because there's less information to review.
- C. Inaccurate, because large differences might exist between what is recorded and what is true.
- D. Best, because of the consistency missing under the accrual method.

11. Completed-contract and percentage-of-completion accounting are:

- A. Examples of cash accounting methods.
- B. Examples of accrual accounting methods.
- C. Either cash or accrual systems, depending on your approach.
- D. Unique and separate from "cash" or "accrual" methods.

12. It's more practical and easier to keep your books:

- A. On a cash basis.
- B. On an accurate, updated accrual basis.
- C. On a percentage-of-completion basis for all jobs.
- D. On a pegboard system.

13. It's more practical and easier to prepare month-end adjustments by:

- A. Preparing a series of detailed journal entries that document all changes.
- B. Getting a computerized accounting system that does adjustments for you.
- C. Reporting all jobs on the cash basis only.
- D. Using a worksheet and not entering adjustments in your books.

14. The time your bookkeeper spends making month-end adjustments:

- A. Is the most valuable function in the bookkeeping routine.
- B. Could be better spent by getting job cost and billing records up to date.
- C. Cuts down on the time required to prepare a month-end worksheet.
- D. Does little to make your records more accurate.

15. Restated income statements will be distorted by:

- A. Interim adjustments to the treatment of accounts.
- B. Major changes in receivable balances.
- C. Large changes in inventory.
- D. All of the above.

Statements by Job

Financial statements by job provide you with a logical basis for analyzing and controlling your profit and loss. Look at profits by job, not just in total. Otherwise, low-yield kinds of jobs remain hidden and effective control over individual jobs is impossible.

A well-maintained, detailed record system is the foundation for accurate by-job statements. Begin your by-job breakdown with a detailed income statement. Remember the following rules for breaking down income and expense data by job.

- 1) All parts of the income statement should be broken down by job or category.
- 2) The sum of all jobs or categories must equal the total income statement. See Figure 27-1.

On a detailed income statement, break down all income-producing areas into job categories. Here are some typical categories:

- 1) Percentage-of-completion contracts
- 2) Contracts under the completed-contract method finished in the current period
- 3) Completed short-term contracts (other than those in 2 above)
- 4) Short-term contracts in progress (other than those in 2 above)
- 5) Other lines of business: one category for each (retail sales, wholesale material sales, etc.)

Breaking out the income from different types of contracts lets you look at income and expenses more carefully. A statement including both percentage-of-completion and completed-contract items could be misleading unless you point out the distinction between them.

Income statements broken down by project require complete by-job records. The job cost card discussed in Chapter 16 is an important feature of good accounting controls. Keep one for each major contract and one for each broad category of work as well. This way, all income, costs, and

Statement by job

All parts of the income statement are broken down by job. The sum of the jobs must equal the statement.

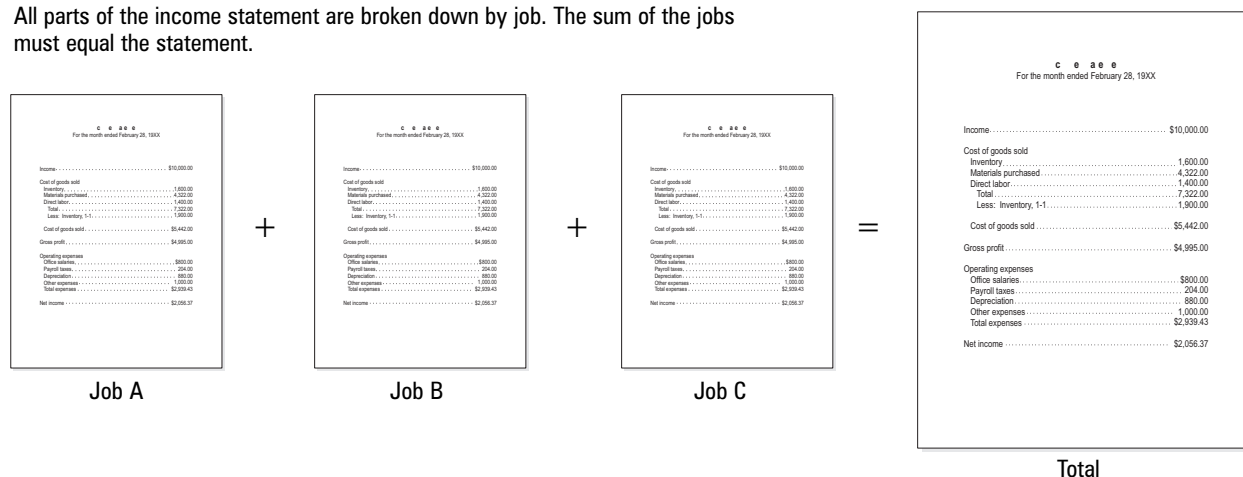


Figure 27-1
Statements by job

expenses are assigned to specific cost centers. The control document for the entire by-job system would then be the income statement itself. All cost items are posted to a job cost card as follows:

- Income can be posted from the sales register
- Direct costs can be posted from the check register
- Expenses are posted from a special analysis done each month
- Payroll can be posted from the analysis done once each payroll period

At the end of the month, each month's current job card postings should equal the current month's profit or loss (total income less total costs and expense).

■ Plotting Job Progress

Visual presentations of data can be more revealing than lists of numbers. Portraying upcoming jobs on a graph lets you plot your profits and compare them month by month with actual results from your monthly job summary. The graph in Figure 27-2 is an example. Job 426 is expected to last 17 months. Within that time, it's expected to yield about \$27,800 in net profits. This profit is plotted to proceed along

the curve in the figure, based on estimates and previous experience with similar work.

As large variances begin to occur between your plotted and actual figures, you have time to identify and control the trend while the job's still underway. No job will follow this curve exactly. But remember that most profits are produced in the middle part of the job. If the curve of actual profits starts upward *too early* in the job schedule, it indicates several possibilities. You might:

- Finish early
- Make a higher overall job profit
- Need to reschedule labor and material for earlier dates
- Need to examine the estimate to determine why you were off

But if the profit doesn't swing up *soon enough* or *fast enough*, it can mean that you will:

- Finish late
- Make a lower overall job profit
- Need to delay scheduled labor and material until later in the job
- Need to examine the estimate and the actual supervision of the job to determine why the job is off schedule

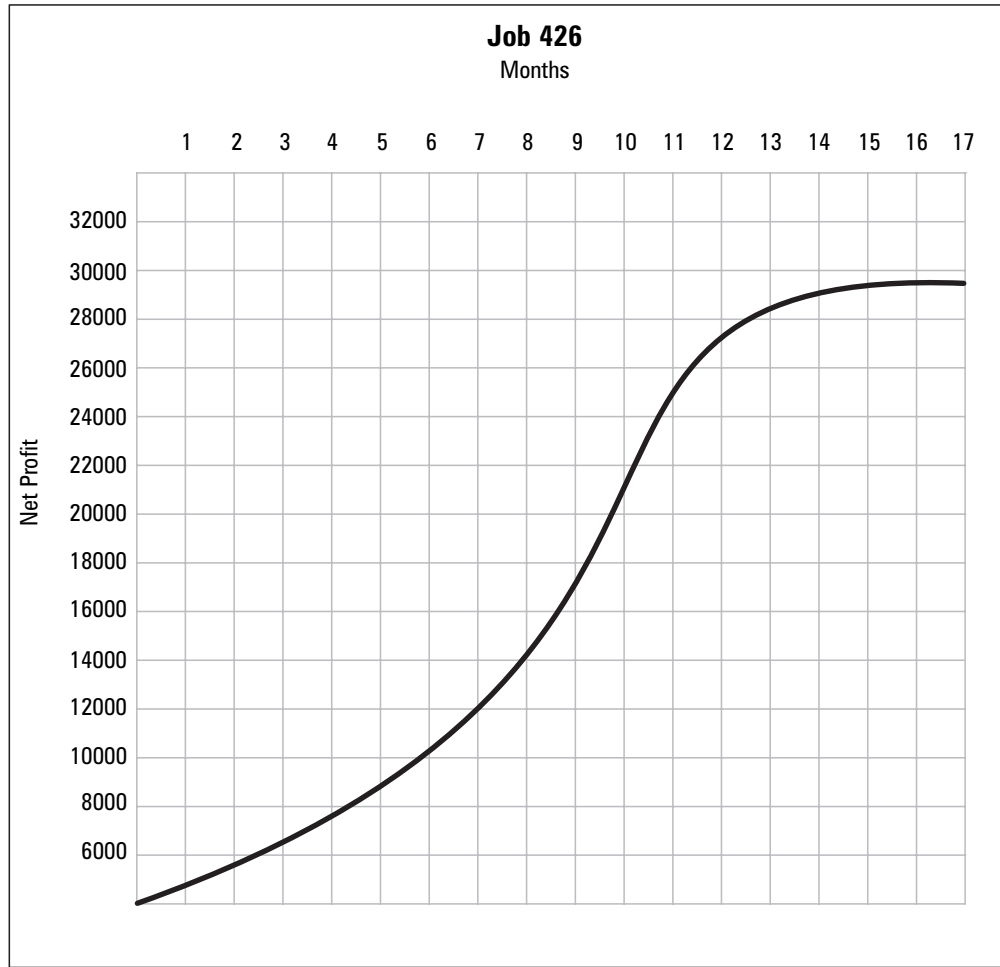


Figure 27-2
Graphing expected job profits

You can prepare a graph like the one in Figure 27-2 for each major contract. Your actual profits — by cost center — can be entered on the graph as the job progresses.

Figure 27-3 shows another type of statement by job shown as a graph. This gives you simultaneous profit data for any job you currently work on. From this graph, you can estimate future cash flow, because the rise and fall of profits on a job can be compared to profits on other jobs.

But while it provides a visual summary of the year's profits, this graph isn't necessarily the best way of presenting results to lenders, investors, and others. Develop your own graphs for in-house use, but provide concise reports for others concerned with your business.

You might want to see the volume of income broken down by job. Or you might wish to compare the volume to profits by job. The latter would provide the most meaningful visual data — a comparison of volume by degree of success. After all, the percentage of yield on gross volume determines whether the estimate is a good one, and whether the expected return on investment will be realized. Most important, comparison between volume and profits indicates what lines of business or types of projects are profitable and which are not.

You obviously want to avoid costly, time-consuming work that doesn't contribute its share to your overall profits. Without a basis for comparison, you can't tell how much or how little your jobs yield for the amount of work and expense you put in.

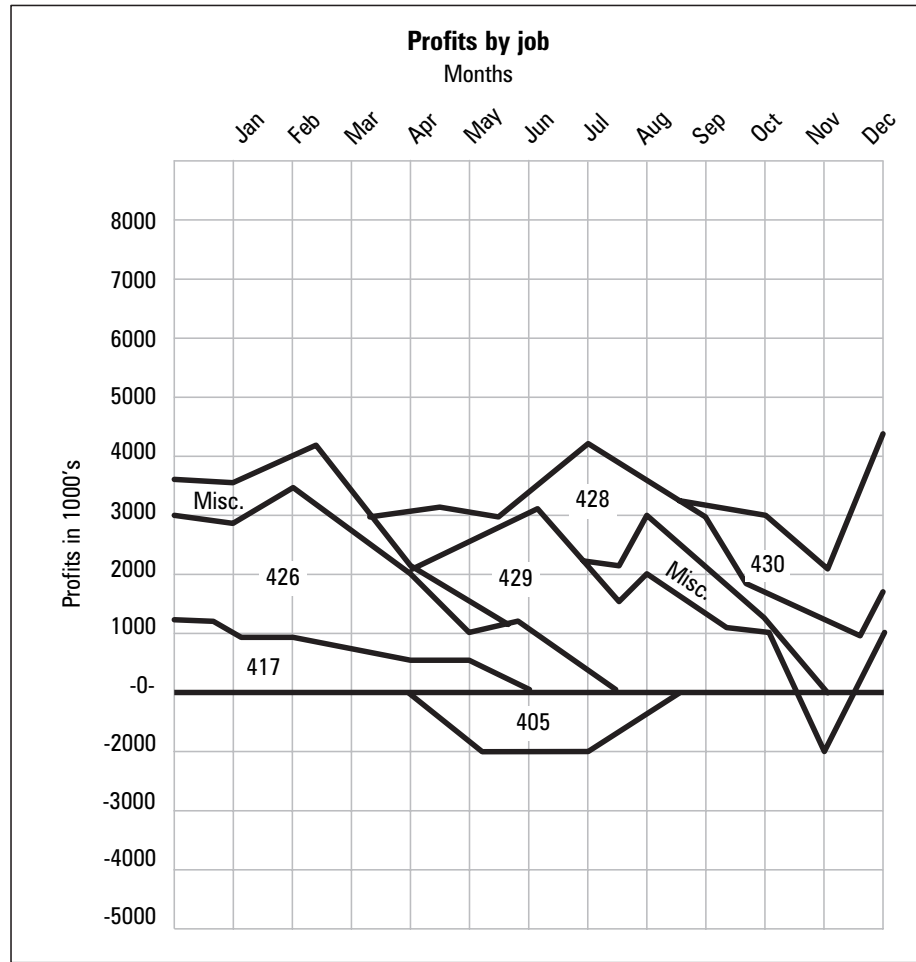


Figure 27-3
Graphing profits by job

Long-Range Job Planning

Part of a thorough by-job analysis of your operation's profitability includes deciding which jobs to take and which to pass up. You think about this every time you bid on a job. But here's a list of factors that affect your ability to do various kinds of work. Refer to it along with your by-job profit analyses and your own best judgment to plan upcoming work.

- **Personality:** This is the most important factor in any builder's success. How you approach problems and handle people largely determines what kinds of work you can do successfully.
- **Capital:** Your degree of investment capacity usually dictates the limit of market involvement. Some kinds of work require heavy equipment investments, bonding qualification, and cash that many builders don't have.
- **Management ability:** A well-organized and experienced builder knows his management limits and can work within them. Entering into new ventures depends on having a knack for knowing how much time, resources, personnel, and data you need and can handle well. Your ability to visualize all the organizational problems in taking on a new job can determine whether or not you bring that job in successfully, on time, and within budget.
- **Work force:** The mix of specialists to general laborers, the types of specialists you have now and would have to hire for a new job, the size of the labor force, and the duration of average employment all affect the jobs you can do.
- **Competition:** How the companies bidding on the same job compare to your own operation in capital, experience, and past success.

- *Experience with similar jobs:* Use job records of past jobs and your own knowledge of your trade to assess your capability to do the new job. The less experience you have at the new job, the longer the job schedule should be, within acceptable limits. But a longer than average schedule means higher than average costs and expenses. If you're not sure that you can finish the unfamiliar work using your usual economical management of time, personnel and expense, build some allowances for schedule and budget overruns into your plans.

Use statements by job throughout the control process, as illustrated by Figure 27-4. Plan your new projects using records from previous jobs. Use job status reports to help control current job progress, and compare reports from various jobs to control your operation's overall profitability. Use final profit and expense results to plan future work and improve your efficiency.

Levels of Control and Job Planning

Think of the control process as having three stages. The first stage is a foundation of solid, well-designed and efficient books and records. All the information you need is prepared and available in the shortest possible time. The second stage is made up of reports and worksheets related to the broad business goal — cost accounting reports, graphs, statements, and analyses. The third stage is the builder's broad business goals, which the first- and second-level controls help to accomplish.

Statements by job are useful immediately in short-range planning. The builder uses them to control business from day to day. Money must be available for weekly payrolls, rent payments, and material purchases. Equipment must be kept running.

These controls have to be enforced:

- Idle time must be kept to a minimum by careful daily scheduling
- Receivables must be kept collectible through vigorous collection procedures
- Inventory levels must be kept reasonable

Statements by job serve two functions. First, they indicate immediate needs in each area of the operation. Second, they help you correct bad trends before they become drastic losses. The long-range goals of a building operation are made up of short-term realities. Each job you begin and end contributes to or detracts from the overall success of your operation.

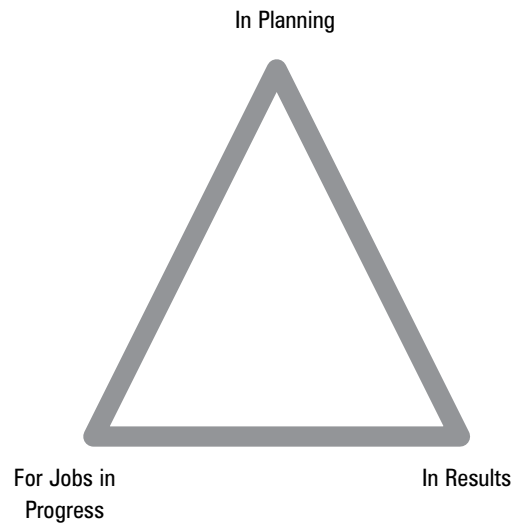


Figure 27-4
Statements and the control cycle

Statements by job are the best indicators of how well you're controlling short-term realities. They help you discover what areas of business aren't producing profits within your range of acceptability.

Faced with unacceptably low profits on some of your regular jobs, you can take one of three actions:

- Institute new controls to increase productivity on those jobs
- Get out of those markets
- Accept low profits as inevitable in some seasons and with some jobs and try to offset them by increasing productivity in other markets

Monitor continuously the controls designed to bring about increases in productivity. This requires timely, accurate statements by job. Take positive action to tighten up costs and expenses or find some way to cut costs. You may have to increase the markup to offset higher costs for a particular type of project, possibly diminishing your market.

Eliminate a specific kind of job only if you understand the consequences of the action. Some part of the overhead assigned to that job type will go on whether you're in that market or not. Make sure you can actually increase yield by dropping a certain type of job. Otherwise, you may discover your overall profits fall

because those jobs absorbed part of your fixed overhead that now isn't being covered by other activities.

The only way to retain a low-yield job type and still achieve overall profit goals is to increase productivity in other areas. Make this decision in full knowledge of all the consequences. A move to improve yields requires tight control of costs and expenses, or higher markups. Total cash flow suffers when volume is reduced, so make sure that you won't be handicapped by a lower cash flow.

Short-range results add up to long-term results. Analyze short-range by-job data carefully to decide on events for next year and beyond. What you're looking for may not show up except as a relatively small and unnoticeable trend in your yearly and quarterly statements. But correcting the trend in upcoming jobs and in other current work may significantly affect how soon you realize your overall goal.

Expansion Planning

Long-range job planning is a detailed version of long-range planning for the overall expansion of your operation. A very common idea is that a business has to grow continuously to be successful.

This is reflected by the way people review financial statements. For example, as long as sales and profits exceed the previous year, or as long as profits on the current mix of jobs are higher than the last mix, you're considered "successful." But if those numbers are the same or smaller, then something must be wrong.

The attitude that growth is always good can damage your business. As head of your operation, selection of jobs requires you have a good working knowledge of your operation's comfort level. Some operations are well suited to going big-time and perhaps eventually becoming a major company that's publicly listed. Others are content remaining relatively

small and local, with a personal touch. The majority of owners are better off when they know how much they can handle and how much they want their company to grow. The truly wise business owner won't allow his operation to exceed that level. He knows that continually trying to enhance the income statement will eventually erode his sense of personal satisfaction.

None of these elements show up on job cost statements; however, to every business owner, they are realities. It's worth the time to define the ideal size of your operation. Limiting factors include capital, competition, and local demand; these can make growth difficult, but not impossible. Territorial expansion means more business, but also more demands on your time. It might mean more profits but a decline in quality and personal control. Or it might mean stronger capitalization and cash flow, with a corresponding higher exposure to liability. Every benefit has a risk as well.

Your control of your operation depends partly on whether you create ideal levels of growth, or just take whatever comes along. Success can be found in many forms, but the truly satisfied business owner is the one who knows how much work he can manage, takes steps to build his operation to that level, and prevents expansion beyond that point. For example, if there's a particular type of work you find personally unrewarding, why chase after it? Since you're your own boss, you might as well decide how you spend your time.

Don't limit your long-range planning to an analysis of last year's outcomes, with the idea that you have to exceed those levels this year. If that level was satisfying, profitable, and manageable, ask yourself if further expansion is a good idea. One of the biggest problems for business owners is that, in hindsight, they realize the management controls got away from them. You can prevent that by exercising the following functions: Creating the ideal size operation, and preventing growth beyond that level.

Test Questions:

1. When you prepare Income Statements by job:

- A. All sections of the statement should be broken down by job or category.
- B. The total of all the breakdowns has to equal the total Income Statement.
- C. The breakdown can be done by specific job, or by the distinction between percentage-of-completion and completed-contract jobs.
- D. All of the above.

2. A Balance Sheet prepared by job:

- A. Should have exactly the same divisions as the income statement.
- B. Should show cash and accrual outcomes.
- C. Can be divided between percentage-of-completion and completed-contract accounting reports.
- D. Would make no sense and provide you with no useful information.

3. Breaking down information by job is useful because:

- A. You have to report to the IRS by job on your tax return.
- B. You can more readily identify variance trends and correct problems early.
- C. Banks always require a lot of detail when you ask for a loan.
- D. All of the above.

4. Job progress graphs are most useful when they:

- A. Indicate problems in time to take corrective action.
- B. Match your expectations.
- C. Map a single job rather than compare similar jobs.
- D. Show a certainty of future profits.

5. If your graph's profit curve appears not to be swinging upward at the expected rate, it means:

- A. You're using an incorrect scale.
- B. You should recalculate your numbers and do the graph over again.
- C. The job might finish late or come in at a lower profit.
- D. You're not going after the right kinds of jobs.

6. The best way to present graphs to outsiders, like loan officers at the bank, is:

- A. By themselves, with no accompanying information.
- B. Accompanied with numerical statements to back them up, as well as any narratives you think are also helpful.
- C. As part of a comprehensive business plan, prepared by an outside consultant, which projects future profits.
- D. As part of a prepared presentation, including a slide show.

7. Statements by job can be used for control in:

- A. Managing jobs in progress and looking for emerging variance trends.
- B. Planning for the future and learning to maximize new jobs with what you learn in the current work you're monitoring.
- C. Creating and controlling the results, meaning both profits and timely completion of each job.
- D. All of the above.

8. For short-range planning, statements by job are:

- A. Not useful at all, since planning is invariably a long-range process.
- B. Valuable for control on a day-to-day basis.
- C. Too time-consuming to be of any immediate help.
- D. Useful only for large jobs.

9. If you face unacceptably low profits, you should:

- A. Institute new controls, and even consider avoiding some markets.
- B. Learn to bid higher or only go for jobs where you're assured of better profits.
- C. Tighten up internal controls, and tell your foremen to cut corners if necessary.
- D. Renegotiate existing contracts and see if some subcontractors will work for less money.

10. The only way to retain a low-yield job type and still meet your overall profit goals is to:

- A. Increase the volume, ensuring a lot of turnover for the same capital.
- B. Increase productivity in other areas.
- C. Get into entirely new markets and look for higher-yielding types of work.
- D. Put more capital into the business.

11. Among the factors affecting your ability to do various kinds of work are:

- A. Capital and competition.
- B. Your own personality and management ability.
- C. Experience with similar jobs.
- D. All of the above.

12. You keep idle time to a minimum through:

- A. Making sure your foremen keep employees busy all the time.
- B. Careful daily scheduling.
- C. More sophisticated computer modeling software.
- D. Creating a chart to analyze how employees spend their time.

13. Expansion of your business operation is:

- A. Essential if you want to stay in business.
- B. A matter of determining how much you want to grow.
- C. Entirely a consequence of market forces.
- D. Achieved by cutting your prices to increase your competitive edge.

14. Year-to-year improvement in profit is:

- A. The most popular method for judging success.
- B. Sometimes a misguided standard for determining success.
- C. Not always necessary in defining your own success.
- D. All of the above.

15. The three stages of accounting control in job planning are:

- A. Journal entries, balancing, and ledger entries.
- B. Balance Sheet, Income Statement, and Statement of Cash Flows.
- C. Books and records, reports and worksheets, and business goals.
- D. On-the-job experience, the hiring process, the cost accounting system.

Statements for Loan Applications

Many builders don't understand loan procedures or how to produce statements for lenders. This chapter shows how to prepare for requesting a loan, what documents you need, and crucial lending procedures every builder should know. In addition, this chapter introduces the Small Business Administration and its services for builders. Loans are available if your approach is correct and if you can document your need for the loan and your ability to repay it.

What Is a Loan?

You're buying money when you take out a loan. Your payments are broken down into two parts:

- 1) Principal, or the money borrowed
- 2) Interest, the cost of borrowing the money

Because different banks have different lending policies, the cost of money varies from bank to bank. This variation may not be great, but it can make a difference of hundreds or thousands of dollars over the term of the loan. For example, the difference of one-half of 1 percent on a 10-year loan for \$30,000 is about \$8.35 per month, or just above \$1,000 over the life of the loan. That's why it pays to shop around for a loan.

The availability of money affects the interest rate. More money is available at some times than at others. This availability is affected by the economy, inflation, unemployment, government programs, and the bank's investment markets. If the bank can invest its money in other investments that earn 12 percent interest, it won't be as willing to loan the builder that

same money for 9 percent. But if the going rate for consumer loans is higher than any other readily-available investment, more money will be available.

Loans As Investments

A bank views a loan as an investment. It allows consumers (among them builders) to use its money for a certain length of time. The builder pays interest on that loan, producing a yield to the bank. Of course, some of the bank's loans aren't collected and become losses. The amount of interest charged on loans takes these losses into account.

Builders, especially modest-size operations, have trouble finding loans because contractors fail in business at a higher rate than many other businesses. These failures are usually a combination of poor management and misuse of capital.

For a builder to get a loan, you must do more than show the lender you're the best craftsman in town. You must convince the bank that you can control costs and expenses, produce a profit, pay back the loan with minimum strain, and maintain a healthy business status with the proceeds from the loan. The loan won't be granted if the bank concludes that it won't help your business. After all, the bank must have the highest confidence that its customers can keep up their monthly loan payments.

Here are some of the personal and business characteristics you must be able to demonstrate to the bank if you want to be considered a good risk:

- Your business is healthy
- There is no management problem, and funds are controlled constantly
- The loan is needed
- The loan payments will not cause undue financial strain
- The loan itself will generate higher cash flow and increase profits

All the above make a good impression on banks and help show that you should get the loan you want. Specifically identify the purpose of the loan. "Working capital" is often given as the purpose. But this doesn't really spell out what you'll use the proceeds of the loan for. More accurate descriptions might include "To purchase heavy equipment" or "To prepay materials for upcoming contracts." Make your explanation complete. Demonstrate how the loan will help you generate income. Following are two typical kinds of explanations:

- 1) For heavy equipment purchase: "The company currently charges \$17.50 per hour in estimates using our old equipment. The current vehicle produces about 25 usable hours of work per week, as it is often out of commission for repairs. With the new equipment work can proceed at about twice the present speed, and the equipment will be usable for over 30 hours per week. This should enable us to reduce our hourly charge and compete for contracts at greater savings."
- 2) For prepaying contract materials: "We will lose on an upcoming contract about 8 percent of our material costs due to limited cash flow from lost discounts and quantity price breaks not currently affordable by the operation. A well-timed series of materials purchases would produce materials to be used over the next four months of construction. The interest on such a loan would equal about one-half of our savings from discounts and price reductions for quantity purchases. The loan can be repaid within 90 days from the installment payments on the same contracts."

Explanations should be in plain English. Use common-sense reasoning. Vague explanations don't describe the exact purpose of the loan or how you expect to save money. Such applications are likely to be rejected.

Some loans aren't needed, and the bank does you a favor by turning you down. The builder who would have trouble making loan payments doesn't need a loan. First, tighten up controls over cash flow and improve management techniques. Then, and only then, should you apply for a loan. See Chapter 22 for guidelines.

Loans as "Profitable" Decisions

When you approach the idea of borrowing money from the bank, what's the first thing that comes to mind? Most people wonder, "I get the money?" They may need the money to solve a problem, like buying equipment, paying off other debts, or getting through a slow season. But there's another important way to view the borrowing process.

You should be able to show this will be a "profitable" loan. That means the cost of borrowing the money will be exceeded by the profits you'll make using that money. You need to prove, to yourself and the lender, that the borrowed funds will be used to generate sales and profits. If you can't, then you should find another solution to your money dilemma, and not borrow money.

In looking at your loan, the lender will want to know whether or not you're a "good risk." That means you'll make repayments on schedule, and you won't default on the loan. A "good risk" is revealed in an excellent credit history and strong capitalization of the business. A bad risk is a business owner who goes to a lender to solve problems of under-capitalization or inability to manage cash flow. If the lender sees that the loan may be a short-term answer to a long-term situation, that loan is generally turned down.

If you prove to the lender that the loan will generate more profits than it costs, that's a substantial reason to grant your request. It shows your awareness that borrowing money is a form of capitalization in your business, not a way to bail you out of a bad situation. Too many people have adopted the attitude that "a penny borrowed is a penny earned," but that's not true. Excessive borrowing has a terrible effect on your operation. The continual erosion of cash flow from required repayment schedules, and the reduction in income from interest repayments, can take down a business faster than any cut-throat competitor.

A responsible approach to borrowing money requires a repayment plan and carefully-scheduled use of funds. The bank or other lender isn't in the business of financial counseling. They literally "rent money" to qualified customers; they also expect to be repaid. You can succeed in borrowing if you take the approach that a loan is a temporary bridge in your overall capitalization plan.

■ Loan Applications

Most banks have their own loan application forms. The two types of forms are personal and business. You'll absolutely be required to complete a business financial statement, although the bank may additionally require that you include a personal financial statement as well.

Most bankers require all or most of the following information in the application package:

- The loan application form
- An income statement for one full year
- A current balance sheet
- A cash flow projection for one year
- A federal income tax return for the previous year

Explain as much of the financial statements as necessary to provide complete information. A typical explanation would include the following:

- Amount of current accounts receivable (an aging list would be helpful)
- The last physical count of inventory and the method used to value it
- Due dates on retainage
- The accounting method used for sales and costs/expenses, the anticipated profits and duration of contracts in progress, and the expected new business during the coming year
- Details on all accounts such as prepaid assets, refundable deposits, and organizational costs
- Details and aging of accounts and taxes payable
- Monthly payments and payoff dates for all existing loans
- Form of organization (sole ownership, partnership, or corporation) and identity of owners or principal stockholders
- Sales history for the past three years, as well as gross and net profits in the same periods
- Depreciation methods used and the remaining useful life of equipment
- Explanations of any unusually large cost or expense items
- Comparative cash flow and net profits statements, with and without expected loan proceeds
- Equipment use and estimated hourly costs
- Discount and price break policies of major material suppliers
- Labor force breakdown — hourly rates by job classifications, numbers of foremen, journeyman, apprentices, and so on

Any additional financial information is helpful. If you've had an audited financial statement in the past year, you may wish to include that statement and the accountant's analysis of it, even though the statement may not be the latest one available.

There's no such thing as giving too much information when you apply for a loan. The banker who reviews your application can't possibly learn all about your business in a brief analysis, so give him or her as much valid information as possible.

Presenting Data to Lenders

Imagine being a loan officer at the local bank. A builder approaches you with a loan application. The financial statements have been scribbled on a yellow pad, no explanations are attached, and the application is incomplete. Your first reaction, based entirely on appearances, is to reject this request for a loan. Obviously, little care was taken in preparing for the application. How can you judge this person as a good credit risk?

But assume that the application and the statements are complete, neatly typed, and supplemented with concise, readable notes. These notes are cross-referenced to the statements themselves. A cash flow projection and a short summary of sales and profits for the last three years are included.

You can now tell a lot about this operation. More important, the owner has taken some time, made your job easier, and has ended up with a concise summary of facts. You know from experience that this person is likely to be as well-organized in all his or her affairs. You might conclude that this must be a well-organized shop with effective management to produce such well-defined material.

You must deal with individuals in banks, and final decisions are made not only on the material presented, but in the manner of the approach — and even on personal appearance. One banker may be totally objective and look only at the documented facts. Another banker may turn down a loan application because the builder wasn't well-groomed. Banks insist that all loans are given a fair review. But they also admit that their loan officers use a good amount of personal judgment and weigh all factors in considering loans and loan applicants.

Most banks will gladly help the builder complete the application correctly. Each bank asks its own questions, and these aren't always easily understood. Most applications require a financial statement to be completed on the form itself. The best approach to this is to fill in the form completely and attach a typed financial statement with notes. Very often, the format of a bank's loan application isn't as informative as your own statement, and there may not be enough space to include full notes. There's no room for a comprehensive cash flow statement on most applications, or for any extra worksheets or detailed historical data.

Prepare a good list of credit references, complete with addresses and phone numbers, and a short description of your credit history with each person or firm.

Co-Signers and Guarantors

Banks are sometimes willing to grant loans on the condition that the applicant get a co-signer or a guarantor.

A co-signer is a person whose credit is well established and who can vouch for the builder's ability and reputation. The bank usually requires co-signers for young adults or minors and for people without a long business record or their own credit references.

A guarantor is similar to a co-signer, except that a guarantor actually promises to pay back the loan if the borrower doesn't. This person will be liable for the balance of the loan if you default, and the bank would expect payment from the guarantor in such cases.

The largest guarantor of loans in the United States is the Small Business Administration. The SBA was formed to encourage free enterprise, and it acts to help small businesses obtain financing.

Small Business Administration

The Small Business Administration (SBA) is a government agency originally formed to help small business owners by offering a loan guarantee. The SBA isn't in the primary business of lending money to businesses; it most often works with small business owners to find loans in their communities, and guarantees repayment on behalf of the business.

The SBA is a substantial resource for builders. It was formed in 1953 to provide "financial, technical and management assistance" to business owners. For most business owners, the interesting part of SBA's service has to do with helping to get loans. Today, SBA is the largest financial backer of small businesses, with a total of \$45 billion in loan guarantees plus venture capital investments of another \$13 billion. According to their report of August 1, 2000, SBA helped over one million small business owners.

The SBA is a valuable resource for "small business" ventures. By SBA definition, a "small" construction firm has annual sales up to \$17 million, and fewer than 100 employees. This covers the majority of companies. SBA states that there are 25 million small businesses in the U.S., and these employ more than half of all workers and make up more than half of the gross domestic product. That's an impressive statistic.

To help this large group of businesses, SBA offers a variety of loan programs and guarantees. One of the

most popular is called the 7(a) Loan Guaranty Program. Under this program, loans are granted to small businesses that can't get loans through normal channels. SBA doesn't make the loans itself. Rather, they work with local lenders who grant the loans. The SBA guarantees repayment, so the lenders' risk is practically nil.

SBA has defined five so-called CAPLine Loan programs. These are short-term working capital loans for small businesses. They include:

- **Seasonal Line:** These are advances tied to seasonal changes in working capital, specifically accounts receivable and inventory.
- **Contract Line:** This is intended for financing direct labor and material costs.
- **Builders Line:** If you're involved with renovating buildings, the project is used as collateral for the financing of labor and material costs.
- **Standard Asset-Based Line:** This is a revolving line of credit secured by your assets. It helps achieve growth by providing draws during cyclical short-term slow periods, with repayments taking place in high cash volume periods.
- **Small Asset-Based Line:** This is a revolving line of credit up to \$200,000. It's similar to the Standard Asset-Based Line but waives some of the requirements for repayment, providing more flexibility.

There are no specific maximums applied to SBA-guaranteed loans. However, the most that the SBA can guarantee is \$750,000. It's possible to get a larger loan, with the lender assuming a portion of the overall risk. For example, you could request a loan for \$1 million with a 75 percent guarantee from the SBA.

Eligibility for SBA Programs

Are you eligible for an SBA guaranty loan? The SBA applies four criteria, although, almost all "small businesses" are eligible.

The criteria include the type and size of business, use of loan funds, and special circumstances.

Type of business: Most businesses are eligible for assistance from the SBA. Your business must be operated for profit (no tax-exempt businesses); your offices must be within the United States and its possessions, and be doing business in the U.S. You must have a reasonable degree of owner's equity in your business.

Size of business: An eligible small business is defined as "one that is independently owned and operated and not dominant in its field of operation." The definition varies by industry. Construction businesses are defined as "small" with sales up to \$17 million per year.

Use of Loan Funds: Proceeds from SBA guaranty loans can be used for most reasonable business purposes, such as purchasing real estate for business offices and facilities; construction and improvements; acquisition of capital assets; purchase of inventory; and working capital. SBA loan proceeds can't be used to finance floor plan needs, purchase investment real estate, pay the owner's delinquent taxes, or pay existing debts (in most cases).

Special Circumstances: Some special circumstances are taken into account. These relate to franchises, holding companies, change of ownership, and resident aliens, among others. If the owner or any principals in the company are on probation or parole, the firm isn't eligible for SBA assistance; the same rule applies for any owners who are incarcerated, or anyone who's currently a defendant in a criminal proceeding.

More information on the SBA and its programs can be found on the Internet. Their home page is located at <http://www.sba.gov/>. Details on CAPLine loans can be found at <http://www.sba.gov/financing/fullcaplines.html>.

The Prospectus Format

Narrative explanations of your operation's history, markets, recent profits, and cash flow can be highly effective presentations to lenders. This type of factual, descriptive presentation is called a prospectus format. The prospectus should be brief and it should be written honestly, without overstating the facts. Don't ignore the bad to point out the good in your business. Bankers appreciate a totally honest presentation when they review a loan application.

The sales promotional, public relations approach to presenting financial information isn't appropriate for loan applications, as bankers aren't sold by glossy, attractive, and slick written reports. The prospectus is less formal than the columns of figures and pure accounting data that goes in the financial statements. Its purpose is to describe your operation and its functions through brief educational sketches and, in some cases, examples. This format is often used by large corporations when they present their annual statement to stockholders. These elaborate and often expensive projects include a letter from the board of directors, financial statements and notes, and a large

amount of text and illustrations to describe the products and the year's successes.

But the "annual statement" type of presentation isn't appropriate for loan applications for small business. These are sales presentations that are carefully prepared to highlight good news and downplay bad news. Although issued by corporations, they're normally prepared by public relations firms who write the letter from the chairman of the board, all the product explanations, and the graphics captions.

The modest prospectus format, on the other hand, is a simple three- or four-page summary of the company's markets and history. It's informative and meaningful to a banker. It quickly familiarizes him or her with the operation in a way that affects the lending decision. An expensive, hard-sell presentation may make the banker suspicious: Why is the builder trying so hard? Forget about elaborate, impressive presentations for loan applications. The most effective presentation combines the best qualities of the accounting and the prospectus methods:

- 1) Complete set of financial statements — balance sheet, income statement, and cash flow statement.
- 2) Detailed notes explaining any special circumstances, accounting methods, inventory valuations, accounts receivable aging, sales and profits for specified periods, and the like. Make sure your notes are fully cross-referenced to the financial statements.
- 3) Narrative description of the company and its markets. Be brief, but include solid, straightforward information. Make the description honest and well-written. Mention both good and bad aspects of your operation's condition.

It's important to mention both the good and the bad. The accounting approach and the public relations approach to the same narrative description or note may be very different. The accounting approach tends to weigh negative conditions just as heavily as positive financial conditions, while the public relations approach is very often more optimistic. Find a reasonable explanation somewhere in between which reflects a businesslike approach to solving problems and changing negative trends.

For example, assume that sales for the past year fell far below previous years and below current expectations. There are three approaches you could use:

- The accounting approach: Sales were 25 percent lower than the previous year. The entire drop in volume was in the bid contract market for new homes.
- The public relations approach: Sales were lower than in previous periods; however, the estimates for next year are promising, as the company is in a better competitive position than ever before.
- The honest compromise: Sales were 25 percent lower than the previous year, due to less activity in the new homes market. This was caused by faulty estimating procedures. A more organized method is now being used.

Notice that in the honest compromise, good and bad news are placed together to offset one another. This lets the lender judge the application with all the required information at hand. There's no need to hunt elsewhere for negative conditions or positive trends that offset the note under examination.

Test Questions:

1. When you borrow money from the bank, you are:

- A. Virtually getting extra money, because borrowing is a relatively cheap way to raise capital and fund operations.
- B. Renting money, because the interest you pay is the cost of using other people's money.
- C. Beating the odds, because banks hate giving loans to business owners.
- D. Starting out on a course you'll never be able to reverse.

2. To be considered a "good risk" by a bank, it helps most if:

- A. Your business is relatively low-risk compared to other contractors.
- B. You have enough insurance so that your risks are minimal.
- C. You have good credit and a healthy cash flow.
- D. You can show that you almost never missed a loan payment in the past.

3. When explaining to the bank why you are applying for a loan, an example of a good reason is:

- A. You'll be able to produce greater profits than you can now, by buying equipment that will cut your costs.
- B. You can't afford to stay in business with the level of liabilities you have, and you have to get a loan right away.
- C. You want to put the money into a savings account as a reserve, because you're trying to look ahead and prepare for unknown events in the future.
- D. A loan is the only way you will be able to get through the winter months without going out of business.

4. If you are self-employed, most banks will require you to provide them with:

- A. Two or three years' tax returns and a current financial statement.
- B. A financial statement prepared by a Certified Public Accountant.
- C. A deposit to cover their processing costs.
- D. An application and a letter of reference.

5. If you have negative information, like late payments on a previous loan, you should:

- A. Avoid mentioning that on your application.
- B. Mention it, but shift the blame to a bank misunderstanding of some kind.
- C. Mention it honestly and give a brief but honest explanation.
- D. Mention it, but explain that you weren't keeping the books at that time so you weren't responsible.

6. A guarantor is someone who:

- A. Agrees to give you a loan, but processes it through a bank.
- B. Promises to make payments for you, and charges you a fee for the service.
- C. Vouches for your reputation and promises to make payments to the bank if you don't.
- D. Borrows money with you and is entitled to one-half of the proceeds.

7. The Small Business Administration is a government agency that:

- A. Loans money to small business owners.
- B. Acts as a consultant to small business owners and will act as guarantor for the owner when approved for a loan.
- C. Gives grants and free money to qualified business owners.
- D. Ensures that any contractor with government contracts complies with all equal employment laws.

8. The prospectus format is:

- A. A pro forma financial statement prepared for the coming five years, projecting “best case” and “worst case” results.
- B. A study concerning prospective customer bases for an expanding business.
- C. A business plan designed to attract new equity partners or joint venture money, or for going public with a stock offering.
- D. A narrative-format explanation of your operation’s history, markets, recent profits, and cash flow.

9. The most effective presentation at the bank includes:

- A. Complete financial statements.
- B. A brief narrative description of your company and your markets.
- C. Notes about any special circumstances, all cross-referenced to your financial statements.
- D. All of the above.

10. The best way to explain something negative in your financial package is with:

- A. The accounting approach, in which you simply report the facts.
- B. The public relations approach, in which everything — good and bad — is made to sound as positive as possible.
- C. The honest compromise, in which good and bad news are presented in an honest way, but with reasonable explanations as well.
- D. The stonewall approach, in which only the good news is presented, because you won’t get the money unless you sell your company’s strengths to the lender.

11. The SBA defines a “small” business in most circumstances as having:

- A. Sales of \$1 million or below per year.
- B. Sales of \$1 million or below per year, and 20 or fewer employees.
- C. Sales of \$17 million or below per year, and 100 or fewer employees.
- D. None of the above; the SBA does not make such distinctions.

12. SBA can't loan money to you if:

- A. You live outside of the United States.
- B. You're on parole.
- C. You plan to use proceeds to invest in real estate.
- D. All of the above.

13. SBA guaranty loans can be made up to:

- A. Any amount without restriction.
- B. \$1 million maximum.
- C. Any amount, but the guarantee maximum is \$750,000.
- D. \$200,000.

14. The SBA's CAPLine program is:

- A. A series of short-term loan programs.
- B. A long-term loan program.
- C. A working capital loan that doesn't have to be repaid.
- D. Available only to large companies under SBA guidelines.

15. Builders needing financial assistance can turn to the SBA and apply for:

- A. The standard small business loan under which all business owners are reviewed by the same standards.
- B. The long-term capital assistance program designed especially for business owners experiencing difficulty with seasonal cash flow disparities.
- C. The Builders Line, under which the project is pledged as collateral to finance labor and material costs.
- D. A working capital loan, which is not industry-specific, but is granted on the basis of sales and number of employees.



Appendix

The Chart of Accounts

*Johnson Construction Company:
Complete Financial Statements*

Expanding & Automating the Accounting System

Income Tax Planning

Answers to Test Questions



Appendix A:

The Chart of Accounts

A chart of accounts enables you to identify transactions using a concise number rather than writing out the entire account number every time. Of course, a chart of accounts applies only for those systems requiring one. In a fully automated system, assignment of transactions might take place in a more sophisticated manner.

If you're making entries manually, a comprehensive chart of accounts will make the job easier. A code can be as short as three digits or as long as you need it to be. However, each digit should be significant and contribute to your bookkeeping controls and to the division of information within your records. The following information will serve as a guide in designing a chart of accounts for your system. It's important that the construction of your chart of accounts proceed with a logical base.

The first step toward designing a chart of accounts is to define the broad classifications of the general ledger. Those are:

- 1) Assets
- 2) Liabilities
- 3) Net Worth
- 4) Income
- 5) Direct Costs
- 6) Selling Expenses
- 7) Fixed Overhead
- 8) Other Income and Expense
- 9) Tax Provisions

Other divisions are possible. You could lump the expense categories together, or you might choose to separate out other income or expense categories. But assume that the designated classifications are as listed. Their numbers (1 through 9) become the first digit for the accounts in each category. This level of identity, the classification of accounts into categories, is

called *level one*. All other levels, up to level five, add numbers to this single digit and further differentiate accounts.

Level two is called the *sub-classification* of accounts. There are two digits in the sub-classification. This greatly increases the possible number of accounts that can be classified in each first level category. For example, level two accounts might look like this:

12	Current Assets
14/15	Long-term Assets
16	Other Assets
18	Intangible Assets
22	Current Liabilities
24	Long-term Liabilities
26	Other Credits
32	Net Worth Accounts (for corporations)
34	Net Worth Accounts (for partnerships)
36	Net Worth Accounts (for sole owners)
42	Income Accounts
48	Returns and Allowances

All asset accounts begin with the asset classification number 1. All liabilities begin with 2, and so forth. Notice there are gaps in the numbering of level two accounts. That's so you can add more second level accounts later. For example, in the Assets category there are four level two accounts listed. But you can add accounts 11, 13, 17, and 19 later if you want to.

Notice also that the sub-classifications can be interrelated as well. For example, under Assets, the second digit, 2, refers to *Current Assets*. Likewise, under Liabilities, the 2 refers to *Current Liabilities*.

In level three of the account code there are three digits — the two discussed above, plus one more. This lets you code many more accounts under each original single-digit category and two-digit sub-classification. Here are some examples:

121	Petty Cash Funds
122	Cash in Banks
123	Cash in Escrow Accounts
124	Notes Receivable
125	Accounts Receivable
...	
141	Land
142	Building
143	Furniture and Fixtures

Level three accounts are those most often used to post the general ledger. But occasionally, you'll need

additional account information for analysis. The best way to handle this is with *level four* sub-accounts. Here are some level four accounts:

122.01	Cash in Bank - General Account
122.02	Cash in Bank - Payroll Account
...	
128.01	Inventory - Raw Materials
128.02	Inventory - Finished Goods

Level five is the cost accounting control level. Here you code for specific cost centers (projects, markets, etc.) and assign exact income, costs, and expenses. The level five code may be a job number or general category, as below:

100 - 599	Project numbers
600	Retail sales
700	Home repairs and maintenance
800	Commercial projects
900	All other income/cost centers

You may choose not to use level five accounts if you do your job cost accounting entirely outside the general ledger.

Here's an illustration of the complete account numbering method:

Classification	x	Level one
Sub-classification	xx	Level two
Account	xxx	Level three
Sub-account	xxx.xx	Level four
Cost account	xxx.xx.xxx	Level five

Build controls into your chart of accounts so it will be equally efficient to post it manually, or later with a computer. Use level five only on income, cost and expense accounts. One rule might be:

Accounts beginning with digits "4" and "5" must include a cost account. Don't post cost accounts to any other category.

Another rule helps you assign expenses, other items, and tax provisions for final cost accounting break-out:

Accounts with "99" as the second and third digits are clearing accounts, to be used only for assigning costs.

Thus, accounts 699, 799, 899, and 999 in Figure A-1 would provide total control for your cost estimate accounting system. Income and direct cost accounts

don't need this feature because you code them by specific jobs.

You can review your accounting documents and spot coding errors more readily with a good chart of accounts. Say you see a common expense coded to a 400-series account. You'll be quickly alerted to question why that expense was coded to income rather than to its proper expense account.

You can't use any other builder's chart of accounts without modification. And even the one included here may require some changes to adapt it to your needs. But the chart of accounts format outlined here can systematically accommodate the large number of new accounts you need for future expansion, and the numeric system can be easily programmed for computerized accounting.

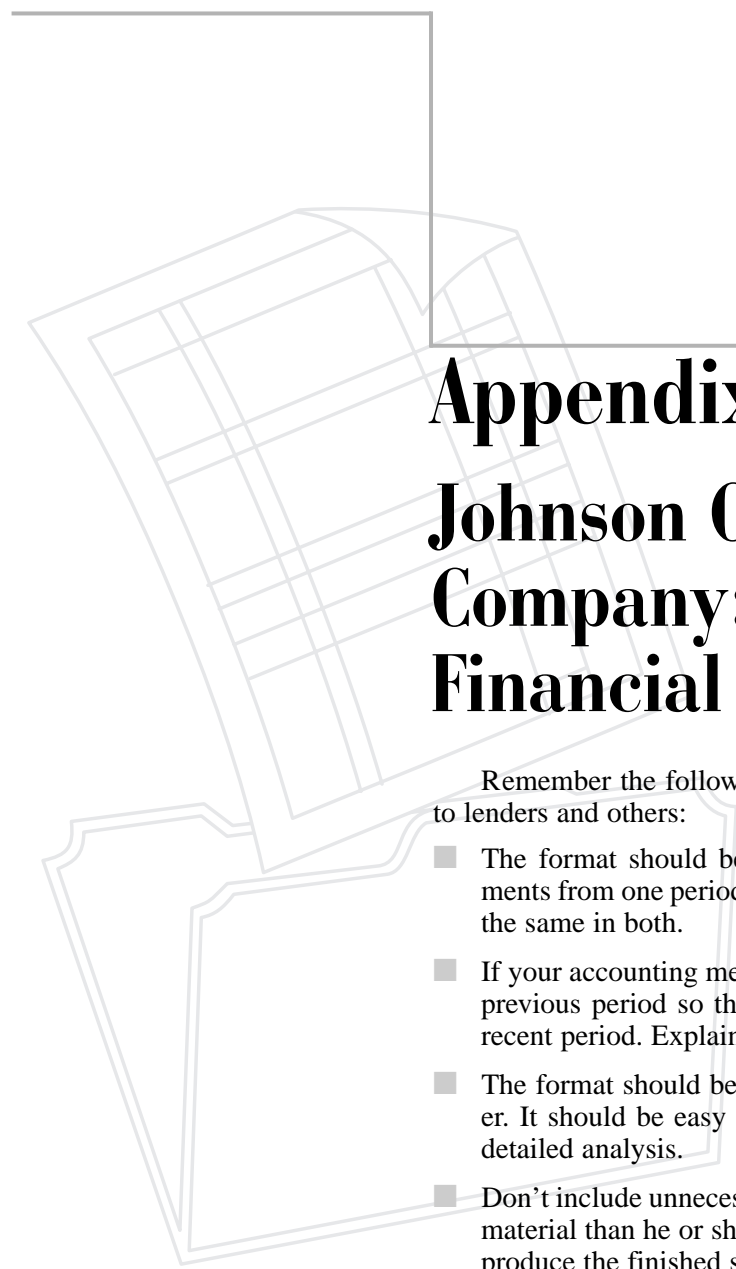
Chart of Accounts

1	Assets	165	Suspense Account
12	Current Assets	166	Accrued Construction-in-Progress Debits (income)
121	Petty Cash Funds	167	Deferred Construction-in-Progress Debits (expenses)
122	Cash in Banks	18	Intangible Assets
123	Cash in Escrow Accounts	181	Covenants Not to Compete
124	Notes Receivable	182	Goodwill
125	Accounts Receivable	2	Liabilities
126	Reserve for Bad Debts	22	Current Liabilities
127	Retainage	221	Accounts Payable
128	Inventories	222	Payroll Taxes Payable
14/15	Long-term Assets	223	Sales Taxes Payable
141	Land	224	Income Taxes Payable
142	Building	225	Other Taxes Payable
143	Furniture and Fixtures	226	Accrued Expenses Payable
144	Autos and Trucks	227	Notes Payable - Current Portion
145	Equipment	24	Long-term Liabilities
146	Machinery	241	Notes Payable - Long-term Portion
147	Small Tools	26	Other Credits
148	Improvements	261	Deferred Construction-in-Progress Credits
152	Accumulated Depreciation - Building	265	Suspense Account
153	Accumulated Depreciation - Furniture and Fixtures	3	Net Worth
154	Accumulated Depreciation - Autos and Trucks	32	Net Worth Accounts (for corporations)
155	Accumulated Depreciation - Equipment	321	Capital Stock
156	Accumulated Depreciation - Machinery	322	Retained Earnings
157	Accumulated Depreciation - Small Tools	328	Profit and Loss - Corporations
158	Accumulated Amortization - Improvements	34	Net Worth Accounts (for partnerships)
16	Other Assets	342	Owners' Equity Accounts
161	Prepaid Assets	343	Owners' Drawing Accounts
162	Deferred Assets	348	Profit and Loss - Partnerships
163	Deposits	36	Net Worth Accounts (for sole owners)
164	Organizational Cost (net of amortization)		

Figure A-1
Chart of accounts

362	Owner's Equity Account	724	Utilities
363	Owner's Drawing Account	725	Telephone
368	Profit and Loss - Sole Ownership	726	Insurance
4	Income	727	Office Supplies
42	Income Accounts	728	Bonds, Licenses and Fees
421	Sales - Percentage-of-Completion Contracts	731	Property Taxes
423	Sales - Completed Contracts	732	Other Taxes
428	Adjustments to Gross Income for Sales Tax Included (clearing account)	735	Printing
48	Returns and Allowances	736	Postage and Delivery
481	Sales Returned - Percentage-of-Completion	737	Legal and Accounting
483	Sales Returned - Completed Contracts	738	Outside Services
485	Sales Returned - Short-term Contracts	741	Dues and Subscriptions
487	Discounts Allowed on Sales	742	Donations and Contributions
5	Direct Costs	745	Union Welfare
52	Direct Cost Accounts	751	Depreciation - Building
521	Materials Purchased	752	Depreciation - Furniture and Fixtures
523	Direct Labor	756	Amortization - Improvements
525	Subcontractors	757	Amortization - Organizational Costs
527	Freight and Delivery	761	Building Maintenance
6	Selling Expenses	766	Interest Expense
62	Selling Expense Accounts	768	Bad Debts
621	Payroll Taxes - Direct Labor	771	Miscellaneous
622	Travel	799	Administrative Expenses - Cost Accounting Control
623	Entertainment	8	Other Income and Expenses
624	Auto and Truck - Gas and Oil	82	Other Income Accounts
625	Auto and Truck - Repairs and Maintenance	821	Interest Income
626	Depreciation - Auto and Truck	822	Capital Gains/Losses
627	Depreciation - Equipment	823	Miscellaneous Other Income
628	Depreciation - Machinery	86	Other Expense Accounts
629	Depreciation - Small Tools	861	Miscellaneous Other Expense
630	Other Repairs and Maintenance	899	Other Income/Expense - Cost Accounting Control
631	Advertising	9	Tax Provisions
699	Selling Expenses - Cost Accounting Control	92	Income Tax Provision Accounts
7	Fixed Overhead	921	Federal Income Tax Provision
72	Fixed Overhead Expenses	925	State Income Tax Provision
721	Salaries and Wages	928	Local Income Tax Provision
722	Payroll Taxes	999	Tax Provision - Cost Accounting Control
723	Rent		

Figure A-1 (continued)
Chart of accounts



Appendix B:

Johnson Construction Company: Complete Financial Statements

Remember the following points when you present financial statements to lenders and others:

- The format should be consistent. It's very difficult to compare statements from one period to another when the presentation and order aren't the same in both.
- If your accounting method or reporting period isn't the same, restate the previous period so that it's presented in the same manner as the most recent period. Explain your restatement in a footnote.
- The format should be the one most informative to you and to the reader. It should be easy to zero in on important information, yet perform detailed analysis.
- Don't include unnecessary data. You only burden the preparer with more material than he or she can handle, and you increase the time it takes to produce the finished statement package.
- Produce the statement efficiently and quickly. Otherwise, it won't be ready for review when you need it most — at the earliest possible date after each month's closing.
- Distinguish between a closing statement, where notes and full explanations are included, and an interim statement, which summarizes monthly data.
- Be sure to include a footnote explaining how the statement was prepared. If no independent accounting review took place, this should be stated in the footnote; if your accountant reviewed your books in preparation for the statement, a footnote should be included to that effect.
- Include footnotes for all other important information — such as pending lawsuits and other contingent liabilities, commitments for leased equipment, upcoming bids that will affect income, one-time nonrecurring items, changes in inventory valuation, exceptionally high bad debts, and other important financial information.

Most builders can benefit from a comparative statement, especially if it compares current information with that from the previous year. Of course, the books and records must be maintained on the same basis in both periods for any comparative statement to be meaningful.

Because this is often a problem, many builders have to wait a full year before comparative statements are available. This unfortunate delay is caused by inconsistent bookkeeping methods. The process of reconstructing a previous year's books into the current year's format would very likely be more work than you could justify. Therefore, you'd have to wait until the following year to see a truly comparative statement.

Reconstructing a previous year's books would involve not only a careful study of the recording methods for sales and accounts payable, but also a detailed audit of all coding to be sure expenses are coded consistently with the previous year.

Figures B-1 through B-3 are the complete financial statements for Johnson Construction Company. The format provides for easy comparison between current year-end results with the same information from the previous year. For easier analysis, use the same format throughout the presentation, as was done here, in all detailed financial statements.

The Balance Sheet

Beginning with Figure B-1, the Balance Sheet, you can see that Johnson Construction has kept nearly all its profits in the business. Fixed assets increased with the net machinery purchase during the year. Notice that current assets have increased more than \$30,000.

The current ratio of 7.3 to 3.3 (current assets divided by current liabilities) is better than 2 to 1, although last year's current ratio was below that standard at 4.0 to 2.6. Interestingly, sales volume dropped more than \$13,000, but gross and net profits increased. This indicates that the company is doing better to control costs and go after jobs that produce more profit.

Note 1 to the Balance Sheet is the accounts receivable aging along with an explanation of the method used to calculate bad debts. Many published financial statements exclude this information. Yet it's a good way to prove that receivables are controlled and that the reserve for bad debts is large enough to cover any uncollectible accounts.

Note 2 in Figure B-1 explains inventory valuation, and Johnson Construction's policy regarding physical counts. This is an important note to include with any financial statement, because it lends credibility to claimed inventory levels. A reader who is unfamiliar with your operation may assume that inventories are often estimated. But builders who can state honestly that they have counted their stock have stronger financial statements.

Note 3 to the Balance Sheet details the current and past year balances of long-term assets. The increase of \$15,000 in gross assets is moderate, considering the size of the business and its existing level of fixed asset investment.

Note 4 explains the company's experience with contingent liabilities. There's detailed information to establish that the company hasn't experienced losses from contract performance complaints. This supports the contention that current contingent liabilities are unlikely to be realized. \$4,000 is a conservative contingent amount. Contingent liabilities do not appear on the financial statement, but should always be disclosed by way of a footnote.

The Income Statement

Figure B-2, Note 1 explains the accounting basis used to record income and recognize costs, expenses and profits. Always include an explanation of your accounting basis with all detailed financial statements.

Notes 2 through 4 provide details about direct costs, selling expense and overhead, to support the summarized information on the income statement.

The Statement of Cash Flows

The Statement of Cash Flows (Figure B-3) shows a substantial increase in the availability of funds, proving that the company has managed its cash well. Control of receivables and bad debts, inventories, outside financing, and costs and expenses has all paid off this year.

Note 1 summarizes the components of the increase in cash flow. Specific provisions and uses of funds are detailed on the statement of cash flows itself, but this note points out where the increases came from by detailing the year's change in current assets and liabilities.

Johnson Construction Company
Balance Sheet
December 31, 20x2 and December 31, 20x1

■ Assets	12/31/x2	12/31/x1
Current Assets:		
Petty Cash	\$ 75.00	\$ 75.00
Cash in Banks	5,216.41	2,960.18
Cash in Escrow Accounts	18,000.00	0.00
Notes Receivable .....	.00	4,000.00
Accounts Receivable (Note 1)	24,415.60	19,942.08
Reserve for Bad Debts	(885.00)	(840.00)
Retainages	10,008.50	4,586.00
Inventories (Note 2)	16,400.00	9,460.50
Total Current Assets	\$ 73,230.51	\$ 40,183.76
Long-term Assets (Note 3)	\$ 113,199.00	\$ 108,990.00
Other Assets:		
Prepaid Assets	\$ 1,400.00	\$ 4,218.66
Deferred Assets .....	.800.00	0.00
Deposits	2,000.50	2,000.50
Organizational Costs	1,213.25	4,150.00
Suspense Accounts .....	.300.00	662.18
Accrued Construction	1,607.35	4,000.00
Deferred Construction .....	.300.60	2,806.62
Total Other Assets	\$ 7,621.70	\$ 17,837.96
Intangible Assets:		
Covenants Not to Compete	\$ 1,600.00	\$ 3,200.00
Goodwill	5,000.00	5,000.00
Total Intangible Assets	\$ 6,600.00	\$ 8,200.00
Total Assets:	\$ 200,651.21	\$ 175,211.72
■ Liabilities and Net Worth		
Current Liabilities:		
Accounts Payable	\$ 12,366.16	\$ 9,400.07
Payroll Taxes Payable	1,606.00	909.60
Sales Taxes Payable	1,016.33	1,104.00
Notes Payable, Current	18,000.00	14,500.00
Total Current Liabilities	\$ 32,988.49	\$ 25,913.67
Long-term Liability:		
Notes Payable, Long-term	\$ 46,606.00	\$ 61,400.03
Deferred Credits:		
Deferred Construction	\$ 2,604.00	\$ 5,900.50
Suspense Accounts .....	.66.50	207.00
Total Deferred Credits	\$ 2,670.50	\$ 6,107.50
Total Liabilities (Note 4)	\$ 82,264.99	\$ 93,421.20
Net Worth:		
Capital Stock *	\$ 46,000.00	\$ 46,000.00
Retained Earnings	35,790.52	2,576.46
Net Income, Current Year	36,595.70	33,214.06
Total Net Worth	\$ 118,386.22	\$ 81,790.52
Total Liabilities and Net Worth	\$ 200,651.21	\$ 175,211.72

* Authorized 100,000 shares, issued 4,600 shares

Figure B-1
Balance sheet (including notes)

■ Note 1 - Accounts Receivable

An aging of Accounts Receivable follows:

	12/31/x2	12/31/x1
0 - 30 days	\$ 12,699.79	\$ 7,745.82
31 - 60 days	9,486.63	6,100.03
61 - 90 days	1,684.18	4,260.50
Over 90 days	545.00	1,835.73
Total	\$ 24,415.60	\$ 19,942.08

Bad Debts are estimated each month, based on a long-term analysis of actual bad debts, on varying levels of charge sales over a twelve-month period. Actual bad debts are written off against the established Bad Debts Reserve.

■ Note 2 - Valuation of Inventories

Inventories are valued at cost. All stock is specifically identified at the time of purchase.

The inventory is kept in three sections — wood products, metals, and all other. Each of these sections is counted physically on a rotating schedule every three months. A complete physical count is taken every December 31.

■ Note 3 - Long-term Assets

	Year Ended December 31, 20x2			Year Ended December 31, 20x1		
	Gross	Depreciation Amortization	Net	Gross	Depreciation Amortization	Net
Land	\$45,000.00	\$ 0.00	\$45,000.00	\$45,000.00	\$ 0.00	\$45,000.00
Building	62,000.00	13,527.00	48,473.00	62,000.00	11,460.00	50,540.00
Furniture and Fixtures	2,400.00	960.00	1,440.00	2,400.00	720.00	1,680.00
Autos and Trucks	46,000.00	37,650.00	8,350.00	37,560.00	31,440.00	6,120.00
Equipment	4,400.00	2,904.00	1,496.00	4,400.00	2,460.00	1,940.00
Machinery	9,000.00	1,260.00	7,740.00	3,000.00	290.00	2,710.00
Small Tools	800.00	700.00	100.00	800.00	600.00	200.00
Improvements	1,600.00	1,000.00	600.00	1,600.00	800.00	800.00
Total	\$171,200.00	\$58,001.00	\$113,199.00	\$156,760.00	\$47,770.00	\$108,990.00

■ Note 4 - Contingent Liabilities

No substantial claims against the company's assets are known. Two suits were filed in the past five years, neither resulting in a judgment against the company. Contingent losses on those claims were under \$50,000, and both cases involved claims related to contract performance.

Current claims involve three cases of minor complaint. The total contingency amounts to under \$4,000 and it appears that the claims can be satisfied under the terms of existing contracts without the need for further litigation.

The company has never experienced losses for non-performance of contracts nor for non-payment of legitimate debts. No such claims are anticipated in the future.

Figure B-1 (continued)
Balance sheet (including notes)

Johnson Construction Company
Income Statement
For the years 20x2 and 20x1

	12/31/x2	12/31/x1
Earned Income (Note 1)	\$524,680.41	\$537,980.65
Returns and Allowances	1,400.00	322.60
Net Sales	523,280.41	537,658.05
Cost of Goods Sold (Note 2)	277,585.00	294,927.66
Gross Profit	\$245,695.41	\$242,730.39
Selling Expenses (Note 3)	82,796.68	76,441.60
Profit before Fixed Overhead	162,898.73	166,288.79
Fixed Overhead (Note 4)	126,303.03	133,074.73
Net Income	\$36,595.70	\$33,214.06

■ **Note 1 - Accounting Basis for Contracts**

Long-term contracts are accounted for and reported by means of the percentage-of-completion method. Income, costs and expenses as reported represent estimates of the degree of completion for each contract and have been developed based on past experience. Revisions to the degree of recognized income (and applicable costs and expenses) are made when facts requiring revisions become known.

Short-term contracts are accounted for and reported by means of the completed contract method. Income, costs and expenses for each contract are recognized upon completion of the total project.

Contracts with a duration of less than one month are reported as follows:

- 1) All income is recognized at the time of final billing whether or not the contract has been completed.
- 2) Costs and expenses are recognized at the time of payment or accrual.

Losses on contracts are accrued at the time that such losses become known.

■ **Note 2 - Cost of Goods Sold**

	12/31/x2	12/31/x1
Inventory January 1	\$9,460.50	\$8,215.06
Materials Purchased	162,418.00	164,200.99
Direct Labor	88,300.00	91,412.06
Sub-Contractors	32,000.00	37,460.00
Freight and Delivery	1,806.50	3,100.05
Total	293,985.00	304,388.16
Less: Inventory December 31	16,400.00	9,460.50
Cost of Goods Sold	\$277,585.00	\$294,927.66

Figure B-2
Income statement (including notes)

■ **Note 3 - Selling Expenses**

	12/31/x2	12/31/x1
Payroll Taxes on Direct Labor	\$9,106.16	\$9,418.60
Travel	1,604.00	806.16
Entertainment	405.90	216.50
Gas and Oil	20,416.82	11,994.66
Repairs and Maintenance	26,419.80	35,607.62
Depreciation - Autos, Trucks	6,210.00	4,650.00
Depreciation - Equipment	444.00	444.00
Depreciation - Machinery	970.00	216.00
Depreciation - Small Tools	100.00	100.00
Other Repairs and Maintenance	15,400.00	11,388.06
Advertising	1,720.00	1,600.00
Total Selling Expenses	\$82,796.68	\$76,441.60

■ **Note 4 - Fixed Overhead**

	12/31/x2	12/31/x1
Salaries and Wages	\$34,625.00	\$31,008.60
Payroll Taxes	3,866.10	3,304.00
Rent (Warehouse)	5,400.00	4,800.00
Utilities	2,206.16	2,988.42
Telephone	2,160.00	2,719.04
Insurance	15,900.00	23,204.66
Office Supplies	702.14	796.80
Bonds, Licenses and Fees	12,408.50	10,900.66
Property Taxes	4,812.66	4,590.14
Other Taxes	1,440.22	3,606.12
Printing	1,220.63	1,109.80
Postage and Delivery	1,760.16	790.04
Legal and Accounting	3,650.00	4,725.00
Outside Services	1,200.00	755.50
Dues and Subscriptions	280.00	375.00
Donations and Contributions	1,300.00	250.00
Union Welfare	12,600.06	14,090.50
Depreciation - Building	2,067.00	2,067.00
Depreciation - Furniture	240.00	240.00
Amortization - Improvements	200.00	200.00
Amortization - Organizational	2,936.75	2,204.16
Amortization - Covenants	1,600.00	1,600.00
Building Maintenance	1,366.85	1,712.60
Interest Expense	6,218.60	7,400.98
Bad Debts	1,495.00	1,712.50
Miscellaneous	4,647.20	5,923.21
Total Fixed Overhead	\$126,303.03	\$133,074.73

Figure B-2 (continued)
Income statement (including notes)

Johnson Construction Company
Statement of Cash Flows
Comparative Two Years

	12/31/x2	12/31/x1
Funds were provided from:		
Net Profits	\$ 36,595.70	\$ 33,214.06
Plus: Non-cash items:		
Depreciation	10,031.00	7,717.00
Amortization	4,736.75	4,004.16
Decrease in Prepaid Assets	2,818.66	1,412.60
Funds provided by operations	54,182.11	46,347.82
Sales of Fixed Assets:		
Autos and Trucks	6,500.00	0.00
Decrease in Suspense Accounts	221.68	18.12
Decrease in other assets	4,898.67	7,206.41
Total Provisions	\$ 65,802.46	\$ 53,572.35
Funds were used for:		
Purchase of Fixed Assets:		
Autos and Trucks	\$ 14,940.00	\$ 21,400.00
Machinery	6,000.00	3,000.00
Decrease in Deferred Assets	800.00	0.00
Decrease in Long-term Notes Payable	14,794.03	12,600.00
Decrease in other liabilities	3,296.50	1,806.10
Total Uses	\$ 39,830.53	\$ 38,806.10
Increase in Funds (Note 1)	\$ 25,971.93	\$ 14,766.25

■ **Note 1 - Components of Increase in Cash Flow**

	12/31/x2	12/31/x1
Cash in Banks	\$ 2,256.23	\$ (118.36)
Cash in Escrow Accounts	18,000.00	0.00
Notes Receivable	(4,000.00)	4,000.00
Accounts Receivable	4,428.52	12,180.82
Retainages	5,422.50	2,650.00
Inventories	6,939.50	4,245.44
Accounts Payable	(2,966.09)	(4,866.23)
Payroll Taxes Payable	(696.40)	(216.45)
Sales Taxes Payable	87.67	41.53
Notes Payable, Current	(3,500.00)	(3,150.50)
Increase in Funds	\$25,971.93	\$14,766.25

Figure B-3
Statement of cash flows (including notes)



Appendix C:

Expanding & Automating the Accounting System

“My bookkeeping system is a mess. I don’t understand accounting. It’s too complex. I guess I need a computer.”

I’ve heard statements like this many times. Even with the availability of super programs that can help small operations organize and streamline their bookkeeping, we remain in a long-term transition from manual to automated systems. Some people are ready to change over, and others are not. Many small operations still do their books by hand. And there are a lot of reasons for this, including:

- Not owning a computer. This is a major consideration for some. In evaluating the cost of automation plus the time investment involved in setting up and learning a new system, it might be hard to justify. However, those who automate often discover added benefits beyond bookkeeping, such as estimating and scheduling systems, the ability to use diskettes and CDs included with many trade books, and access to the Internet and the information available to the different trades.
- Fear of change or upgrade. This is another valid point. A computerized system is a big change and if everything is going smoothly using a manual system, a lot of people are resistant to change. You know the old saying: “If it ain’t broke, don’t fix it.” It’s important to realize, however, that not being automated could prevent you from getting a lot of valuable, timesaving information you can get only by being on-line like your competitors.
- Help from a family member, such as a spouse, who keeps the books and prepares monthly billings. In many small businesses where a spouse or another family member maintains a relatively simple set of books, you might not need a computer — if bookkeeping is the only reason for getting one. Chances are, though, that if you automated, you’d discover that many other aspects of your operation would be enhanced.

- The belief that automation won't make the task more efficient. It's likely you won't see increased efficiency immediately in a small-volume operation if you decide to automate. However, in the long run, automating will free your time and enable growth. It'll save you bookkeeping time used for posting and math, especially when you need to prepare monthly billings and maintain job cost records. In a well-designed system, a full set of primary and secondary books can be generated out of posting for income, costs and expenses in a single entry for each — rather than having to repeat steps for each specialized purpose.

Automating your system because it's a mess would be the worst reason to get a computer. If you're having problems managing your record-keeping now, a computer will only automate your mess. Many modern accounting systems are designed to simplify the entire process, so you might be able to overcome some disorganization by automating high-volume routines like check writing. You don't have to put everything on the computer all at once. If you're having organizational problems, consider a modified approach. If you're not happy with it, you can go back to the old way of processing information.

A lot of resistance was based on the claim that computer systems cost too much money. The hardware, software, or integrated system was so cost-prohibitive that a relatively small operation couldn't justify the cost. That's no longer true. You don't need programs tailored to your individual situation. Neither does it cost a fortune to become automated. You can get a fast computer, complete with monitor, for \$1,000 or less. And there's a lot of accounting software to choose from in a surprisingly low price range.

The benefits of automation that extend beyond daily transactions are so attractive they should be included in your decision. However, there are reasons for and against automating your system. You should not automate when:

- Your present accounting system is a mess and you think automation will solve your organizational problems.
 - Your transaction level is very low and you don't need automation for other functions such as estimating, scheduling or material cost information.
 - Your reason for automating your bookkeeping system is limited to one routine, like payroll. In a small operation, outside payroll services can do your payroll without your having to buy a computer and changing your entire system. In fact, even if you become fully automated, you might still find it more efficient to have an outside service prepare your payroll.
- You should consider a computer or upgrading the one you're using, when:
- Your transaction volume is heavy and it takes a lot of time to post your books, track information, and correct mathematical errors.
 - You're doing a lot of repetitive work, posting once to the journal and again to job cost or accounts receivable records.
 - Your business is expanding rapidly and you expect a lot of growth in the near future.
 - You expect to bid a lot of big jobs, and would like to have access to updated cost and estimating software.
 - Your books have a high number of errors due to inaccurate manual posting and it's taking too much of your time to track down the errors and fix them.
- In determining how to best automate, consider either a fully-integrated system (where everything is entered into the automated system) or one where only parts of your system are automated (for high-transaction areas like check writing). Think of your accounting system as containing four separate areas:
- Books and records of original entry. These are supported by source documents like invoices, receipts and vouchers.
 - Ledgers. These include your general ledger and any subsidiary ledgers you keep as well, such as Accounts Receivable.
 - Support systems. These include the records maintained to document transactions such as purchase orders, sales invoices, statements, bank account forms, petty cash slips, and other files.
 - Cost and control reports. These include reports and worksheets you need to determine trends and conditions in your operation — equipment costs, maintenance, bad debts, budgets and forecasts, and analysis procedures.
- Any of these areas can be automated or left on a manual basis if that's more efficient. Train yourself to know at a glance where all parts of your system fit within these categories. Once you can recognize where a particular item belongs in this four-part breakdown, you'll have a better understanding of your

accounting system as a whole. That'll also help you to determine whether or not a particular routine should be automated. Trace a few numbers through the book-keeping stages to test your knowledge of your system.

Following are some examples of accounting transactions you'll likely encounter, and the steps they'll follow on the way to final posting in your general ledger:

Sales

Sales invoice

Accounts receivable control

Check received and bank deposit

Sales journal

General Ledger entries:

Increases to Cash, Accounts Receivable, Sales

Material Purchase

Purchase order

Invoice received

Check register

Canceled check

Bank statement

General Ledger entries:

Increases to Materials, decreases to Cash

Payroll

Assignment sheet

Time card

Payroll register

Individual payroll earnings record

General Ledger entries:

Increases to Direct Labor or Salaries accounts, payroll tax accruals and expense, decrease to Payroll account (cash)

Petty Cash Expense

Petty cash voucher slip

Reimbursement check

Imprest fund summary

General Ledger entries:

Increase to expense accounts, decrease to Cash by way of check register

Selling Expense or Fixed Overhead

Invoice or schedule of recurring payments

Check register

Bank statement

General Ledger entries:

Increases to specific accounts, decrease to Cash

Note Payments

Original note agreement

Check register

General Ledger entries:

Increase to Interest Expense, decrease to Note Balance and Cash

Depreciation

Equipment and depreciation record

General Journal

General Ledger entries:

Increases to Depreciation Expense and Accumulated Depreciation

Prepaid Insurance

Original worksheet to set up the asset

General Journal

General Ledger entries:

Increase to Insurance Expense, decrease to Prepaid Asset

Accounting information must flow so that you can track every entry from its original document to the summary totals in the General Ledger. Your book-keeping system must furnish ways to prove every entry posted anywhere. Yet it must be an efficient, smoothly-running process that takes the least possible amount of time. Finding this middle ground depends on your ability to pick the best method for your particular operation. No one system works for everyone.

Your Chart of Accounts

If you plan to automate, you need to find out how your transactions will be coded and assigned to accounts in the new system. If your system will require coded entry for transactions, you need to ensure that your manually operated chart of accounts will work in the new system. If not, you'll need to transfer to a better system.

When you automate, the conversion will create some confusion and uncertainty for a while. Getting through the changes require patience and careful tracking of information. Adjusting your chart of accounts is typical of the changes you'll experience in your transition from a manual to an automated accounting system.

Most automated accounting systems have their own built-in coding methods. Many don't use numerical codes at all. However, it depends on the system design you choose. If your new system uses numerical

coding, some strict rules will apply because automation requires uniformity. Here are some examples:

- All codes must have the same number of digits.
- If some accounts use sub-account designations, those designations will probably have to apply universally. The areas not using sub-accounts will show zeros to the right of the decimal. (It might be possible to suppress them.)
- Every system is different, but accounting software is designed to be easy to use.
- Your entries will occur through one of three methods: entry of sales date, check writing, or specialized journal entries. (The same as your manual system.)
- Unlike manually operated systems, you won't be able to make changes informally. Any change to entries will require a new journal adjustment. While automated systems may be more efficient, they're also less flexible than manual accounting systems.

■ Automation Options

If you'll be automating for the first time, consider taking it slowly. Very few small operations have to be fully automated in the first pass. Think about starting with high-volume and complex routines, including check writing, payroll, accounts receivable, and billing routines.

As you gain confidence using your automated system, and you've worked out any problems that came up during your conversion and training period, you can start adding other routines. Remember, outside services for processing payroll are valuable even if that's the only routine you automate. In the complex regulatory environment that surrounds the payroll process today, you have to consider many demands, including:

- Preparation of checks in a timely manner.
- Payroll deposit requirements, both federal and state.
- Preparation of payroll reporting, both federal and state.
- Federal unemployment reports.
- Workers' compensation reports.
- Annual employee tax statements.

All of these require promptness and accuracy. Even if you only have a few employees, payroll can be one of your most demanding routines. Deposit deadlines, report preparation, and compliance with regulations are difficult to track using a manual system. A relatively inexpensive outside payroll service can save you a lot of time and worry.

■ Research Before You Buy

Today, automating your system is easier than ever before, and affordable, efficient systems are readily available. However, you'll need to research the best hardware and software for your particular business needs before jumping in. You want to make the best decision for your business and there are many choices.

You can purchase hardware with basic operating systems built-in from companies like Gateway Computers and others. With these packages, you get the hardware you need plus basic software programs such as word processing and a few others. It's not likely the accounting software you need would be included. You would have to purchase that separately. The advantage of the package deal is that it often comes with financing and high-quality technical support.

A good place to start checking into efficient accounting software is with your competition. What are other builders using? How is it working out? What are the good and bad points of a particular system? Ask these questions of other builders you know. You might be surprised at how willing they are to share information with you. If local competitors hesitate to talk to you, contact other companies of your size, operating outside your area, like a neighboring county.

There are four attributes to look for in a good software system:

- Ease of use. In today's well-developed software market, the real competition is in easy-to-use systems that do a lot for you. If a system appears to be hard to use or understand, keep looking.
- Flexibility. A truly valuable software program is one that enables you to modify it as your needs change. If you don't want to automate your entire system at once, be sure you pick a program that lets you do as much or as little as you want. Look for a program that will expand with you, and allow you to process a high volume of transactions without limitation.

- Training help and material. You'll need to ensure that you and your employees will be able to learn how to use your new system. The most efficient way to achieve this is through tutorials and "help" routines that are part of the program. It helps if the software comes with a detailed operation manual — one that covers all the basics. Some popular programs, such as Quicken®, QuickBooks Pro® and others, are also supported with independently published self-help books like

Quicken for Builders or *Contractor's Guide to QuickBooks Pro* (both published by Craftsman Book Company). Check your local bookstore to see what's available. Keep in mind that programs with a lot of self-help material available are probably the more popular ones in use; otherwise, a publisher wouldn't agree to print the books. So this is another good way to pick a program. Also find out if the manufacturer offers free technical support for their buyers, preferably through a toll-free telephone number.



Appendix D:

Income Tax Planning

One of the most valuable benefits of your bookkeeping system is that it helps you prove the accuracy of the income and deductions you claim on your tax returns. Tax law doesn't require you use any specific method to keep records, only that your records are complete. This requires that:

- 1) You keep your business records separate from your personal accounts.
- 2) All vouchers and receipts are clearly marked and cross-referenced.
- 3) You can trace all income from bank deposits to entries in your books. It's important to deposit *all* income in your business account, and to explain fully any other money you deposit (such as loan proceeds, personal capital you contribute to the business, or deposits held for customers).
- 4) Pay all business expenses with a company check. If you ever pay cash or use personal funds, keep the receipts and write a check from your business account to reimburse yourself.
- 5) Don't use the business account to pay your personal bills.
- 6) Include written documentation with your tax returns to explain unusual deductions.

■ Reducing Your Taxes

It's perfectly legal to pay the minimum tax required by law. You're allowed to arrange your financial affairs to reduce your tax liability. Techniques used to minimize taxes include *shifting*, *conversion*, *deferral*, and *sheltering*.

Shifting

If you expect a greater tax burden this year than next, you can shift income to the following year and increase expenses this year. This technique is only effective if you report on the cash basis (since accrued income and expense must be reported in the period incurred).

For example, suppose you report on the cash basis and need to reduce this year's tax liability. You can ask your customers to delay payments due in December. Have them pay you in January instead. As long as the customer agrees and doesn't give you a check until January, that income is shifted.

If the money is *available* to you in December and you simply postpone depositing it until January, you can't defer reporting it. This only works if the money really isn't available to you. On the other hand, if someone writes you a check in December, but you don't receive it until January, you can defer that income.

Conversion

Until 1986, it was possible to convert fully taxable gains to long-term capital gains by keeping them longer than six months. Under rules in effect at that time, only 40 percent of your gain was taxable. Now, it's no longer possible to convert ordinary gains to long-term capital gains.

It's still possible to convert income, though. For instance, you can pay one of your children to work in your yard, shop, or on a crew. Within limits, income earned by a dependent child is taxed at the child's lower rate.

Deferral

You can defer taxes in several ways. One is to use the completed contract accounting method to the extent allowed under the law. Another is to delay, until the following year, the sale of equipment on which you expect to profit.

If you have discretion in the timing of completion on part of a job, delaying work until the following year will effectively defer the recognition of gain, even on the accrual basis. Assume for example that you report on the percentage-of-completion basis. You have promised to complete a major section of a job no later than January 15. Crews are available to work between December 20 and January 10. While you could complete the work before year-end, that

means reporting the gain during the current tax year. If you delay completion until January, you can defer that income.

You can also defer tax on income by placing up to \$2,000 per year into an Individual Retirement Account (IRA). While you may not qualify for a deduction for contributions made, the earnings on an IRA are not taxed until you withdraw them.

Sheltering

You can shelter part of your income as a self-employed contractor if you set up a Keogh plan. This lets you place 25 percent of your net earnings in the account and deduct those contributions from your adjusted gross income. But the 25 percent limit refers to income *after* you compute your Keogh contribution, so it's actually only 20 percent of your gross income. Here's how it works: If your net income is \$100,000, you could contribute \$20,000 to your Keogh account. That's 25 percent of your net after the Keogh contribution, but only 20 percent of your total net income.

Like an IRA, earnings in a Keogh account are deferred for tax purposes until money is withdrawn. So a Keogh account provides you with two tax advantages.

- You shelter from taxation the money you put away
- Earnings on the sheltered funds aren't taxed until you begin withdrawals

You can begin to withdraw the money any time after you reach age 59½. If you take the money out before that, it's taxed immediately, and you're charged an early withdrawal penalty (as a form of additional tax).

Other Tax Planning

As the owner and manager of your own business, you can and should plan for taxes all year, not just at year end. Once the end of the year has passed, it's too late to reduce your taxes for that year.

But there are some timely ways to reduce your tax burden:

Timing asset purchases to maximize depreciation and expensing provisions — For example, you've already purchased equipment this year, and are entitled to write off the maximum \$10,000 through the expensing allowance. You plan to purchase more equipment,

but by postponing it until next year, you can use the additional expensing allowance then.

Timing asset sales to delay recognition of a gain — You plan to sell a heavy truck on which you'll make a profit. If you sell it this year, the sale will increase your profit beyond the maximum tax bracket you currently expect. You can postpone the sale until next year if you expect profits to be lower then.

Making contributions — Say you have about \$2,500 in useless, obsolete inventory. Another contractor has offered you \$250 for it, and that's probably the most you can expect to get. But by contributing the inventory to charity, you can write off the market value as a contribution. You can write off the material based on its *market value*. If you're in the 15 percent tax bracket, you'll realize \$375. Giving away the obsolete stock would be more profitable tax-wise than selling it. And, you can time the contribution to your best advantage depending on your expected profit this year and next.

Periodic reviews — Consult your accountant or tax advisor well before year end. Review income to date and estimate your tax liability for the year. Devise ways to shift, convert, defer or shelter income while there's still time.

Create an accounting system that supports your tax awareness. You don't keep financial records just to comply with the law. Use your accounting records to reduce your tax burden within the law. Make your record keeping system a source for profits.

Your books aren't working for you unless they provide the information you need, when you need it.

The more you can learn from your accounting system, the more valuable that system is. Make it a source of knowledge, not just a necessary evil of operating a business. Here's a summary of tax-saving ideas:

- 1) Make your record keeping system as simple as possible. The easier it is to record information, the easier it is to compile and file reports and tax returns.
- 2) Train employees to give you timely, summarized information. The sooner you get what you need, the better prepared you'll be to take action.
- 3) Design every report, record and file to simplify your tax planning and cost control procedures. Think of ways to compile information, either manually or with a computer, so you can review your bottom line whenever you want.
- 4) Check profit and loss more frequently than monthly or quarterly. Estimate your net profit and tax liability regularly. And stay in touch with income and debt levels. When you see the numbers wandering away from your budgets and estimates, consult your accountant and take necessary action. This may include tax reduction planning, or revisions of estimated tax payments to avoid underpayment penalties.
- 5) Remain aware of changing tax regulations. Subscribe to a tax update newsletter, or speak regularly with your accountant or tax advisor. Remember, the complex system of rules under which you operate changes continually. Don't be caught uninformed and unprepared.



Answers to Test Questions

Chapter 1:

1. D
2. B
3. C
4. A
5. C
6. D
7. D
8. D
9. B
10. C
11. B
12. A
13. C
14. A
15. B

Chapter 2:

1. B
2. C
3. C
4. A
5. C
6. D
7. A
8. B
9. D
10. B
11. C
12. D
13. D
14. B
15. C

Chapter 3:

1. D
2. A
3. C
4. A
5. A
6. B
7. D
8. A
9. B
10. B
11. B
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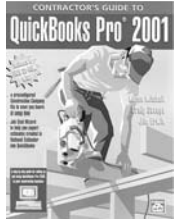
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125 forms you can copy and use — or load into your computer (from the FREE disk enclosed). Then you can customize the forms to fit your company, fill them out, and print. Loads into *Word* for Windows™, *Lotus 1-2-3*, *WordPerfect*, *Works*, or *Excel* programs. You'll find forms covering accounting, estimating, fieldwork, contracts, and general office. Each form comes with complete instructions on when to use it and how to fill it out. These forms were designed, tested and used by contractors, and will help keep your business organized, profitable and out of legal, accounting and collection troubles. Includes a CD-ROM for Windows™ and Mac. **400 pages, 8 1/2 x 11, \$41.75**

How to Succeed With Your Own Construction Business

Everything you need to start your own construction business: setting up the paperwork, finding the work, advertising, using contracts, dealing with lenders, estimating, scheduling, finding and keeping good employees, keeping the books, and coping with success. If you're considering starting your own construction business, all the knowledge, tips, and blank forms you need are here. **336 pages, 8 1/2 x 11, \$28.50**

Contracting in All 50 States

Every state has its own licensing requirements that you must meet to do business there. These are usually written exams, financial requirements, and letters of reference. This book shows how to get a building, mechanical or specialty contractor's license, qualify for DOT work, and register as an out-of-state corporation, for every state in the U.S. It lists addresses, phone numbers, application fees, requirements, where an exam is required, what's covered on the exam and how much weight each area of construction is given on the exam. You'll find just about everything you need to know in order to apply for your out-of-state license. **416 pages, 8 1/2 x 11, \$36.00**

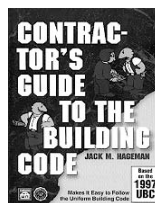
Basic Plumbing with Illustrations, Revised

This completely-revised edition brings this comprehensive manual fully up-to-date with all the latest plumbing codes. It is the journeyman's and apprentice's guide to installing plumbing, piping, and fixtures in residential and light commercial buildings: how to select the right materials, lay out the job and do professional-quality plumbing work, use essential tools and materials, make repairs, maintain plumbing systems, install fixtures, and add to existing systems. Includes extensive study questions at the end of each chapter, and a section with all the correct answers. **384 pages, 8 1/2 x 11, \$33.00**

National Painting Cost Estimator

A complete guide to estimating painting costs for just about any type of residential, commercial, or industrial painting, whether by brush, spray, or roller. Shows typical costs and bid prices for fast, medium, and slow work, including material costs per gallon; square feet covered per gallon; square feet covered per manhour; labor, material, overhead, and taxes per 100 square feet; and how much to add for profit. Includes a CD-ROM with an electronic version of the book with *National Estimator*, a stand-alone Windows™ estimating program, plus an interactive multimedia video that shows how to use the disk to compile construction cost estimates. **440 pages, 8 1/2 x 11, \$48.00. Revised annually**

Contractor's Guide to the Building Code Revised



This new edition was written in collaboration with the International Conference of Building Officials, writers of the code. It explains in plain English exactly what the latest edition of the *Uniform Building Code* requires. Based on the 1997 code, it explains the changes and what they mean for the builder. Also covers the *Uniform Mechanical Code* and the *Uniform Plumbing Code*. Shows how to design and construct residential and light commercial buildings that'll pass inspection the first time. Suggests how to work with an inspector to minimize construction costs, what common building shortcuts are likely to be cited, and where exceptions may be granted. **320 pages, 8 1/2 x 11, \$39.00**

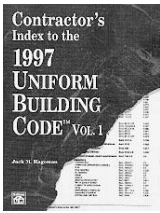
Moving to Commercial Construction

In commercial work, a single job can keep you and your crews busy for a year or more. The profit percentages are higher, but so is the risk involved. This book takes you step-by-step through the process of setting up a successful commercial business; finding work, estimating and bidding, value engineering, getting through the submittal and shop drawing process, keeping a stable work force, controlling costs, and promoting your business. Explains the design/build and partnering business concepts and their advantage over the competitive bid process. Includes sample letters, contracts, checklists and forms that you can use in your business, plus a CD-ROM with blank copies in several word-processing formats for both Mac and PC computers. **256 pages, 8 1/2 x 11, \$42.00**

Plumbing & HVAC Manhour Estimates

Hundreds of tested and proven manhours for installing just about any plumbing and HVAC component you're likely to use in residential, commercial, and industrial work. You'll find manhours for installing piping systems, specialties, fixtures and accessories, ducting systems, and HVAC equipment. If you estimate the price of plumbing, you shouldn't be without the reliable, proven manhours in this unique book. **224 pages, 5 1/2 x 8 1/2, \$28.25**

Contractor's Index to the 1997 Uniform Building Code



Finally, there's a common-sense index that helps you quickly and easily find the section you're looking for in the *UBC*. It lists topics under the names builders actually use in construction. Best of all, it gives the full section number and the actual page in the *UBC* where you'll find it. If you need to know the requirements for windows in exit access corridor walls, just look under *Windows*™. You'll find the requirements you need are in Section 1004.3.4.3.2.2 in the *UBC* — on page 115.

This practical index was written by a former builder and building inspector who knows the *UBC* from both perspectives. If you hate to spend valuable time hunting through pages of fine print for the information you need, this is the book for you.

192 pages, 8 1/2 x 11, paperback edition, \$26.00

192 pages, 8 1/2 x 11, loose-leaf edition, \$29.00

Contractor's Growth & Profit Guide

Step-by-step instructions for planning growth and prosperity in a construction contracting or subcontracting company. Explains how to prepare a business plan: select reasonable goals, draft a market expansion plan, make income forecasts and expense budgets, and project cash flow. You'll learn everything that most lenders and investors require, as well as the best way to organize your business. **336 pages, 5 1/2 x 8 1/2, \$19.00**

Concrete & Formwork

This practical manual has all the information you need to select and pour the right mix for the job, lay out the structure, choose the right form materials, design and build the forms, and finish and cure the concrete. Nearly 100 pages of step-by-step instructions show how to construct and erect most types of site-fabricated wood forms used in residential construction.

176 pages, 8 1/2 x 11, \$17.75

Troubleshooting Guide to Residential Construction

How to solve practically every construction problem — before it happens to you! With this book you'll learn from the mistakes other builders made as they faced 63 typical residential construction problems. Filled with clear photos and drawings that explain how to enhance your reputation as well as your bottom line by avoiding problems that plague most builders. Shows how to avoid, or fix, problems ranging from defective slabs, walls and ceilings, through roofing, plumbing & HVAC, to paint.

304 pages, 8 1/2 x 11, \$32.50

Basic Engineering for Builders

If you've ever been stumped by an engineering problem on the job, yet wanted to avoid the expense of hiring a qualified engineer, you should have this book. Here you'll find engineering principles explained in non-technical language and practical methods for applying them on the job. With the help of this book you'll be able to understand engineering functions in the plans and how to meet the requirements, how to get permits issued without the help of an engineer, and anticipate requirements for concrete, steel, wood and masonry. See why you sometimes have to hire an engineer and what you can undertake yourself: surveying, concrete, lumber loads and stresses, steel, masonry, plumbing, and HVAC systems. This book is designed to help the builder save money by understanding engineering principles that you can incorporate into the jobs you bid. **400 pages, 8 1/2 x 11, \$36.50**



Basic Lumber Engineering for Builders

Beam and lumber requirements for many jobs aren't always clear, especially with changing building codes and lumber products. Most of the time you rely on your own "rules of thumb" when figuring spans or lumber engineering. This book can help you fill the gap between what you can find in the building code span tables and what you need to pay a certified engineer to do. With its large, clear illustrations and examples, this book shows you how to figure stresses for pre-engineered wood or wood structural members, how to calculate loads, and how to design your own girders, joists and beams. Included FREE with the book — an easy-to-use limited version of NorthBridge Software's *Wood Beam Sizing* program.

272 pages, 8 1/2 x 11, \$38.00

National Renovation & Insurance Repair Estimator

Current prices in dollars and cents for hard-to-find items needed on most insurance, repair, remodeling, and renovation jobs. All price items include labor, material, and equipment breakouts, plus special charts that tell you exactly how these costs are calculated. Includes a CD-ROM with an electronic version of the book with *National Estimator*, a stand-alone *Windows*™ estimating program, plus an interactive multimedia video that shows how to use the disk to compile construction cost estimates.

568 pages, 8 1/2 x 11, \$49.50. Revised annually

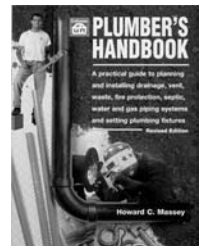
Pipe & Excavation Contracting

Shows how to read plans and compute quantities for both trench and surface excavation, figure crew and equipment productivity rates, estimate unit costs, bid the work, and get the bonds you need. Explains what equipment will deliver maximum productivity for a job, how to lay all types of water and sewer pipe, and how to switch your business to excavation work when you don't have pipe contracts. Covers asphalt and rock removal, working on steep slopes or in high groundwater, and how to avoid the pitfalls that can wipe out your profits on any job.

400 pages, 5 1/2 x 8 1/2, \$29.00

Plumber's Handbook Revised

This new edition shows what will and won't pass inspection in drainage, vent, and waste piping, septic tanks, water supply, graywater recycling systems, pools and spas, fire protection, and gas piping systems. All tables, standards, and specifications are completely up-to-date with recent plumbing code changes. Covers common layouts for residential work, how to size piping, select and hang fixtures, practical recommendations, and trade tips. It's the approved reference for the plumbing contractor's exam in many states. Includes an extensive set of multiple choice questions after each chapter, and in the back of the book, the answers and explanations. Also in the back of the book, a full sample plumber's exam. **352 pages, 8 1/2 x 11, \$32.00**



Plumber's Exam Preparation Guide

Hundreds of questions and answers to help you pass the apprentice, journeyman, or master plumber's exam. Questions are in the style of the actual exam. Gives answers for both the Standard and Uniform plumbing codes. Includes tips on studying for the exam and the best way to prepare yourself for examination day. **320 pages, 8 1/2 x 11, \$29.00**

Construction Estimating Reference Data

Provides the 300 most useful manhour tables for practically every item of construction. Labor requirements are listed for sitework, concrete work, masonry, steel, carpentry, thermal and moisture protection, doors and windows, finishes, mechanical and electrical. Each section details the work being estimated and gives appropriate crew size and equipment needed. Includes a CD-ROM with an electronic version of the book with *National Estimator*, a stand-alone *Windows*™ estimating program, plus an interactive multimedia video that shows how to use the disk to compile construction cost estimates. **432 pages, 11 x 8 1/2, \$39.50**

Concrete Construction & Estimating

Explains how to estimate the quantity of labor and materials needed, plan the job, erect fiberglass, steel, or prefabricated forms, install shores and scaffolding, handle the concrete into place, set joints, finish and cure the concrete. Full of practical reference data, cost estimates, and examples.

571 pages, 5 1/2 x 8 1/2, \$25.00

Building Contractor's Exam Preparation Guide

Passing today's contractor's exams can be a major task. This book shows you how to study, how questions are likely to be worded, and the kinds of choices usually given for answers. Includes sample questions from actual state, county, and city examinations, plus a sample exam to practice on. This book isn't a substitute for the study material that your testing board recommends, but it will help prepare you for the types of questions — and their correct answers — that are likely to appear on the actual exam. Knowing how to answer these questions, as well as what to expect from the exam, can greatly increase your chances of passing.

320 pages, 8 1/2 x 11, \$35.00

The Contractor's Legal Kit



Stop "eating" the costs of bad designs, hidden conditions, and job surprises. Set ground rules that assign those costs to the rightful party ahead of time. And it's all in plain English, not "legalese." For less than the cost of an hour with a lawyer you'll learn the exclusions to put in your agreements, why your insurance company may pay for your legal defense, how to avoid liability for injuries to your sub and his employees or damages they cause, how to collect on lawsuits you win, and much more. It also includes a FREE computer disk with contracts and forms you can customize for your own use. **352 pages, 8 1/2 x 11, \$59.95**

Contractor's Survival Manual

How to survive hard times and succeed during the up cycles. Shows what to do when the bills can't be paid, finding money and buying time, transferring debt, and all the alternatives to bankruptcy. Explains how to build profits, avoid problems in zoning and permits, taxes, time-keeping, and payroll. Unconventional advice on how to invest in inflation, get high appraisals, trade and postpone income, and stay hip-deep in profitable work. **160 pages, 8 1/2 x 11, \$22.25**

Estimating Electrical Construction

Like taking a class in how to estimate materials and labor for residential and commercial electrical construction. Written by an A.S.P.E. National Estimator of the Year, it teaches you how to use labor units, the plan take-off, and the bid summary to make an accurate estimate, how to deal with suppliers, use pricing sheets, and modify labor units. Provides extensive labor unit tables and blank forms for your next electrical job. **272 pages, 8 1/2 x 11, \$19.00**

Estimating Excavation

How to calculate the amount of dirt you'll have to move and the cost of owning and operating the machines you'll do it with. Detailed, step-by-step instructions on how to assign bid prices to each part of the job, including labor and equipment costs. Also, the best ways to set up an organized and logical estimating system, take off from contour maps, estimate quantities in irregular areas, and figure your overhead. **448 pages, 8 1/2 x 11, \$39.50**

Scheduling With Microsoft Project 2000

Step-by-step instructions for using this software to keep your projects on schedule and within budget. Learn to adjust time scales, milestones, and tasks, assign and track resources and costs, monitor and update the schedule with baselines, keep track of changes to the schedule, compare and analyze actual costs, and record expenditures. With this powerful tool, you'll not only be able to track a job's progress, you can make reports of exactly where on the timeline everything is and when it will be done. Includes a disk with examples from a typical residential schedule. Requires that you have Microsoft Project 2000 on your computer. **128 pages, 7 x 9, \$49.95**

Estimating Framing Quantities

Gives you hundreds of time-saving estimating tips. Shows how to make thorough step-by-step estimates of all rough carpentry in residential and light commercial construction: ceilings, walls, floors, and roofs. Lots of illustrations showing lumber requirements, nail quantities, and practical estimating procedures. **285 pages, 5 1/2 x 8 1/2, \$34.95**

Craftsman's Illustrated Dictionary of Construction Terms



Almost everything you could possibly want to know about any word or technique in construction. Hundreds of up-to-date construction terms, materials, drawings and pictures with detailed, illustrated articles describing equipment and methods. Terms and techniques are explained or illustrated in vivid detail. Use this valuable reference to check spelling, find clear, concise definitions of construction terms used on plans and construction documents, or learn about little-known tools, equipment, tests and methods used in the building industry. It's all here. **416 pages, 8 1/2 x 11, \$36.00**

Home Inspection Handbook

Every area you need to check in a home inspection — especially in older homes. Twenty complete inspection checklists: building site, foundation and basement, structural, bathrooms, chimneys and flues, ceilings, interior & exterior finishes, electrical, plumbing, HVAC, insects, vermin and decay, and more. Also includes information on starting and running your own home inspection business. **324 pages, 5 1/2 x 8 1/2, \$24.95**

Estimating Home Building Costs

Estimate every phase of residential construction from site costs to the profit margin you include in your bid. Shows how to keep track of man-hours and make accurate labor cost estimates for footings, foundations, framing and sheathing finishes, electrical, plumbing, and more. Provides and explains sample cost estimate worksheets with complete instructions for each job phase. **320 pages, 5 1/2 x 8 1/2, \$17.00**

Greenbook Standard Specifications For Public Works Construction

Since 1967, eleven previous editions of the popular "Greenbook" have been used as the official specification, bidding and contract document for many cities, counties and public agencies throughout the West. New federal regulations mandate that all public construction use metric documentation. This complete reference, which meets this new requirement, provides uniform standards of quality and sound construction practice easily understood and used by engineers, public works officials, and contractors across the U.S. Includes hundreds of charts and tables. **480 pages, 8 1/2 x 11, \$59.95**

Managing the Small Construction Business

Overcome your share of business hassles by learning how 50 small contractors handled similar problems in their businesses. Here you'll learn how they handle bidding, unit pricing, contract clauses, change orders, job-site safety, quality control, overhead and markup, managing subs, scheduling systems, cost-plus contracts, pricing small jobs, insurance repair, finding solutions to conflicts, and much more. **243 pages, 8 1/2 x 11, \$34.95**

Estimating With Microsoft Excel

Most builders estimate with *Excel* because it's easy to learn, quick to use, and can be customized to your style of estimating. Here you'll find step-by-step instructions on how to create your own customized automated spreadsheet estimating program for use with *Excel*. You'll learn how to use the magic of *Excel* to create detail sheets, cost breakdown summaries, and links. You'll put this all to use in estimating concrete, rebar, permit fees, and roofing. You can even create your own macros. Includes a CD-ROM that illustrates examples in the book and provides you with templates you can use to set up your own estimating system. **150 pages, 7 x 9, \$49.95**



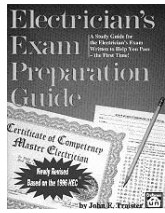
Residential Electrical Estimating

A fast, accurate pricing system proven on over 1000 residential jobs. Using the manhours provided, combined with material prices from your wholesaler, you quickly work up estimates based on degree of difficulty. These manhours come from a working electrical contractor's records — not some pricing agency. You'll find prices for every type of electrical job you're likely to estimate — from service entrances to ceiling fans. **320 pages, 8 1/2 x 11, \$29.00**

Commercial Metal Stud Framing

Framing commercial jobs can be more lucrative than residential work. But most commercial jobs require some form of metal stud framing. This book teaches step-by-step, with hundreds of job site photos, high-speed metal stud framing in commercial construction. It describes the special tools you'll need and how to use them effectively, and the material and equipment you'll be working with. You'll find the shortcuts, tips and tricks-of-the-trade that take most steel frames years on the job to discover. Shows how to set up a crew to maintain a rhythm that will speed progress faster than any wood framing job. If you've framed with wood, this book will teach you how to be one of the few top-notch metal stud framers. **208 pages, 8 1/2 x 11, \$45.00**

Electrician's Exam Preparation Guide



Need help in passing the apprentice, journeyman, or master electrician's exam? This is a book of questions and answers based on actual electrician's exams over the last few years. Almost a thousand multiple-choice questions — exactly the type you'll find on the exam — cover every area of electrical installation: electrical drawings, services and systems, transformers, capacitors, distribution equipment, branch circuits, feeders, calculations, measuring and testing, and more. It gives you the correct answer, an explanation, and where to find it in the latest NEC. Also tells how to apply for the test, how best to study, and what to expect on examination day. **352 pages, 8 1/2 x 11, \$32.00**

Getting Financing & Developing Land

Developing land is a major leap for most builders — yet that's where the big money is made. This book gives you the practical knowledge you need to make that leap. Learn how to prepare a market study, select a building site, obtain financing, guide your plans through approval, then control your building costs so you can ensure yourself a good profit. Includes a CD-ROM with forms, checklists, and a sample business plan you can customize and use to help you sell your idea to lenders and investors. **232 pages, 8 1/2 x 11, \$39.00**

Steel-Frame House Construction

Framing with steel has obvious advantages over wood, yet building with steel requires new skills that can present challenges to the wood builder. This new book explains the secrets of steel framing techniques for building homes, whether pre-engineered or built stick by stick. It shows you the techniques, the tools, the materials, and how you can make it happen. Includes hundreds of photos and illustrations, plus a CD-ROM with steel framing details, a database of steel materials and manhours, with an estimating program. **320 pages, 8 1/2 x 11, \$39.75**



National Building Cost Manual

Square foot costs for residential, commercial, industrial, and farm buildings. Quickly work up a reliable budget estimate based on actual materials and design features, area, shape, wall height, number of floors, and support requirements. Includes all the important variables that can make any building unique from a cost standpoint. **240 pages, 8 1/2 x 11, \$23.00. Revised annually**

2000 International Residential Code

Replacing the CABO One- and Two-Family Dwelling Code, this book has the latest technological advances in building design and construction. Among the changes are provisions for steel framing and energy savings. Also contains mechanical, fuel gas and plumbing provisions that coordinate with the *International Mechanical Code* and *International Plumbing Code*. **578 pages, 8 1/2 x 11, \$55.30. Published by I.C.B.O.**

The Web @ Work

If you're even thinking about creating a Web site for your construction business, you should have this book. It's filled with practical ideas you can use to draw customers to your site. If you're not exactly a Web master, you'll find every aspect of the Internet explained in simple terms that even a non-techie can understand. Includes complete instructions for writing and sending HTML e-mail as well as building a home page using Netscape Composer. You'll learn how to create animated graphics to display on your home page and a page showing your projects for customers to see. Includes a CD-ROM with Web-authoring software. **180 pages, 8 1/2 x 11, \$49.95**

Profits in Buying & Renovating Homes

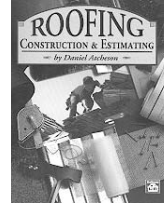
Step-by-step instructions for selecting, repairing, improving, and selling highly profitable "fixer-uppers." Shows which price ranges offer the highest profit-to-investment ratios, which neighborhoods offer the best return, practical directions for repairs, and tips on dealing with buyers, sellers, and real estate agents. Shows you how to determine your profit before you buy, what "bargains" to avoid, and how to make simple, profitable, inexpensive upgrades. **304 pages, 8 1/2 x 11, \$19.75**

Constructionary

A unique pocket-sized dictionary of up-to-date construction words and phrases in English-Spanish and Spanish-English. Here you'll find over 1000 construction terms and 70 commonly used on-the-job phrases. This dictionary includes phonetic pronunciation, tool section, commonly used sentences, and conversion tables. **170 pages, 4 x 7, \$14.95. Published by ICBO**

Roofing Construction & Estimating

Installation, repair and estimating for nearly every type of roof covering available today in residential and commercial structures: asphalt shingles, roll roofing, wood shingles and shakes, clay tile, slate, metal, built-up, and elastomeric. Covers sheathing and underlayment techniques, as well as secrets for installing leakproof valleys. Many estimating tips help you minimize waste, as well as insure a profit on every job. Troubleshooting techniques help you identify the true source of most leaks. Over 300 large, clear illustrations help you find the answer to just about all your roofing questions. **432 pages, 8 1/2 x 11, \$38.00**



National Repair & Remodeling Estimator

The complete pricing guide for dwelling reconstruction costs. Reliable, specific data you can apply on every repair and remodeling job. Up-to-date material costs and labor figures based on thousands of jobs across the country. Provides recommended crew sizes; average production rates; exact material, equipment, and labor costs; a total unit cost and a total price including overhead and profit. Separate listings for high- and low-volume builders, so prices shown are specific for any size business. Estimating tips specific to repair and remodeling work to make your bids complete, realistic, and profitable. Includes a CD-ROM with an electronic version of the book with *National Estimator*, a stand-alone *Windows*™ estimating program, plus an interactive multimedia video that shows how to use the disk to compile construction cost estimates. **296 pages, 8 1/2 x 11, \$48.50. Revised annually**

Finish Carpenter's Manual

Everything you need to know to be a finish carpenter: assessing a job before you begin, and tricks of the trade from a master finish carpenter. Easy-to-follow instructions for installing doors and windows, ceiling treatments (including fancy beams, corbels, cornices and moldings), wall treatments (including wainscoting and sheet paneling), and the finishing touches of chair, picture, and plate rails. Specialized interior work includes cabinetry and built-ins, stair finish work, and closets. Also covers exterior trims and porches. Includes manhour tables for finish work, and hundreds of illustrations and photos. **208 pages, 8 1/2 x 11, \$22.50**

National Electrical Estimator

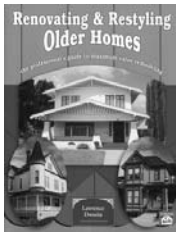
This year's prices for installation of all common electrical work: conduit, wire, boxes, fixtures, switches, outlets, loadcenters, panelboards, raceway, duct, signal systems, and more. Provides material costs, manhours per unit, and total installed cost. Explains what you should know to estimate each part of an electrical system. Includes a CD-ROM with an electronic version of the book with *National Estimator*, a stand-alone *Windows*™ estimating program, plus an interactive multimedia video that shows how to use the disk to compile construction cost estimates. **520 pages, 8 1/2 x 11, \$47.75. Revised annually**

Markup & Profit: A Contractor's Guide



In order to succeed in a construction business, you have to be able to price your jobs to cover all labor, material and overhead expenses, and make a decent profit. The problem is knowing what markup to use. You don't want to lose jobs because you charge too much, and you don't want to work for free because you've charged too little. If you know how to calculate markup, you can apply it to your job costs to find the right sales price for your work. This book gives you tried and tested formulas, with step-by-step instructions and easy-to-follow examples, so you can easily figure the markup that's right for your business. Includes a CD-ROM with forms and checklists for your use. **320 pages, 8 1/2 x 11, \$32.50**

Renovating & Restyling Older Homes



Any builder can turn a run-down old house into a showcase of perfection — if the customer has unlimited funds to spend. Unfortunately, most customers are on a tight budget. They usually want more improvements than they can afford — and they expect you to deliver. This book shows how to add economical improvements that can increase the property value by two, five or even ten times the cost of the remodel. Sound impossible? Here you'll find the secrets of a builder who has been putting these

techniques to work on Victorian and Craftsman-style houses for twenty years. You'll see what to repair, what to replace and what to leave, so you can remodel or restyle older homes for the least amount of money and the greatest increase in value. **416 pages, 8 1/2 x 11, \$33.50**

Wood-Frame House Construction

Step-by-step construction details, from the layout of the outer walls, excavation and formwork, to finish carpentry and painting. Contains all new, clear illustrations and explanations updated for construction in the '90s. Everything you need to know about framing, roofing, siding, interior finishings, floor covering and stairs — your complete book of wood-frame homebuilding. **320 pages, 8 1/2 x 11, \$25.50. Revised edition**

Roof Framing

Shows how to frame any type of roof in common use today, even if you've never framed a roof before. Includes using a pocket calculator to figure any common, hip, valley, or jack rafter length in seconds. Over 400 illustrations cover every measurement and every cut on each type of roof: gable, hip, Dutch, Tudor, gambrel, shed, gazebo, and more.

480 pages, 5 1/2 x 8 1/2, \$22.00

Residential Structure & Framing

With this easy-to-understand guide you'll learn how to calculate loads, size joists and beams, and tackle many common structural problems facing residential contractors. It covers cantilevered floors, complex roof structures, tall window walls, and seismic and wind bracing. Plus, you'll learn field-proven production techniques for advanced wall, floor, and roof framing with both dimensional and engineered lumber. You'll find information on sizing joists and beams, framing with wood I-joists, supporting oversized dormers, unequal-pitched roofs, coffered ceilings, and more. Fully illustrated with lots of photos.

272 pages, 8 1/2 x 11, \$34.95. Published by JLC

Inspecting A House

Here you'll find a rational sequence of home inspection so that you won't miss anything in heating, electrical, plumbing, and drainage systems. Whether it's an overloaded electrical panel, a driveway that sends water into the basement when it rains, or a gas furnace that's improperly vented, you'll be shown how to spot and evaluate problem areas.

266 pages, 8 x 10, \$24.95

Simplified Guide to Construction Law

Here you'll find easy-to-read, paragraphed-sized samples of how the courts have viewed common areas of disagreement — and litigation — in the building industry. You'll read about legal problems that real builders have faced, and how the court ruled. This book will tell you what you need to know about contracts, torts, fraud, misrepresentation, warranty and strict liability, construction defects, indemnity, insurance, mechanics liens, bonds and bonding, statutes of limitation, arbitration, and more. These are simplified examples that illustrate not necessarily who is right and who is wrong — but who the law has sided with. **298 pages, 5 1/2 x 8 1/2, \$29.95**



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