CONSTRUCTION CONTRACTORS ADVANCED ISSUES

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Chapter 1

NATURE AND SIGNIFICANCE OF THE CONSTRUCTION INDUSTRY

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Identify common participants in the construction industry.
- Recall the four basic types of construction contracts.
- Identify the role of the surety in the construction process.
- Recall the basics of contract accounting.

Types of Contractors

The definition of a contractor is very broad. It is important that any adviser understands the general makeup of the industry. Different types of contractors have different risks and service needs. Construction contractors can be classified based on their size, the type of construction activity they undertake, and the nature and scope of their responsibility for the construction project. As a first step toward servicing your construction clients, you should understand how they fit into the summary in exhibit 1-1.

Exhibit 1-1 Types of Contractors

Contractor Type	Nature and Scope of Work
Design-build	Also known as a "turnkey" contractor, they specialize in heavy construction such as power plants, refineries, and hydroelectric facilities. A design-build project requires extensive management skill, including the ability to manage projects over a wide geographical area. A design-build contractor manages all phases of the project, from the feasibility study through the final construction.
Heavy Construction	May build roads, bridges, dams, airports, or large buildings. Typically, the work is performed for public agencies or large corporations that do their own designing and engineering.
General Contractors	Prime contractor who enters into a contract with the owner and who takes full responsibility for its completion. May engage subcontractors to perform specific parts or phases of projects. Specialties may include housing, schools, hospitals, office buildings, manufacturing plants, or warehouses.
Subcontractors	A second-level contractor who enters into a contract with the general contractor to perform a specific part or phase of a project. Specialties may include electrical, plumbing, concrete, mechanical (including heating and air conditioning) carpentry, drywall, and flooring.
Construction Manager	Enters into an agency contract with the owner to supervise and coordinate the construction activity on the project, including negotiating contracts with others for the work. The distinction between a construction contractor and a construction manager is important for tax purposes.

Players in the Industry

Just as it is important for us to understand the type of contractor we are dealing with, it is also important that we understand whom the contractor is dealing with. This understanding should play a major role in determining client acceptance criteria and who may be affected by the advice we have given to our client:

- *Project owner* – Who are the parties that our client serves?
- *Architect and engineer* – Where are the plans coming from? What is the reputation? Who is approving our application for payments?
- *Other contractors* – What type of subcontractors do we use? What is the capacity of the subcontractors being used? Are the subcontractors bonded?
- *Surety* – What does the surety look at? What is the reputation of the surety? What is the contractor's reputation with the surety?
- *Bond agent* – What is the contractor's relationship with our bonding agent? What avenues of bonding does the agent provide?
- *Lawyer* – What experience does the contractor's lawyer have with construction law? Experience with labor law?
- *Banker* – Who is loaning the funds for the contractor's project? What agreements does our client have in place to fund his cash flows?

PLAYERS WITHIN THE CONTRACTOR CLIENT

- *Owners of the company* – What is their character? What is their reputation? What is their attitude?
- *Controller and bookkeeper* – What is their experience? What is their skill? How reliable are they in providing information?
- *Estimators* – What is their experience? What is their ability? How effective are they?
- *Project managers* – What is their experience? What is their capacity?
- *Labor force* – Is the labor force unionized? What is the skill?

Types of Contracts

Not only are there many types of contractors and players in the construction industry, there are also many types of construction contracts. The type of contract is very important to the contractor and CPA alike. From the contractor's point of view, there are advantages and disadvantages to all types of contracts. From the CPA's point of view, the different types of contracts may lead to different ways of looking at a contract to properly recognize revenues. There are four basic types of contracts:

- Fixed fee or lump sum – This contract is one in which the price is not usually subject to adjustment because of the costs incurred by the contractor. Owners prefer fixed-price contracts because they feel it limits their exposure due to the contractor's cost overruns. The disadvantage to the owner is the length of time it takes to complete a fixed-price contract. The delay is due to the finalizing of plans and the process of seeking competitive bids.
- Time and material – Time and material contracts generally provide for payments to the contractor on the basis of direct labor at fixed hourly rates. These rates are adjusted by the contractor's added overhead and indirect costs. The charges to the owner also include materials with certain markup in pricing.
- Cost plus – Cost plus contracts provide for reimbursement of allowable costs plus a fee as defined by the contract. The purpose for using the cost plus contract is due to the essence of time at hand for completion. This is the fastest and typically more costly of contracts for a project owner.
- Unit price – Unit price contracts are those contracts under which the contractor is paid a specified amount for every unit of work performed. It is very similar to a fixed-fee contract, but it varies if the number of units required differs from the engineer's report of bid package. Contracts are usually awarded based on the total of the unit prices applied to the units supplied in the bid package. The method of determining the contract price will vary, as the bidding contractors will compete on different pricing and structural strategies.

The Role of the Surety

Most contracts entered into have some form of bonding requirements. These bonding requirements assure the project owner that the project taken on by the bonded contractor will be completed for the price the contract was bid at by the contractor and accepted by the project owner. The bond is secured by an entity called a surety. The surety makes decisions about the contractor based on the contractor's character, capacity, and capital.

The surety industry has learned some tough lessons in the construction industry. The surety industry is scrutinizing and screening clients more now than they ever have. It is important that the CPA be aware of this, as much of the surety's evaluation come as a result of the financial statements.

Contractors will be asked to document their financial stability and profitability, as well as their ability to meet current and future obligations. To meet more detailed underwriting, contractors may be expected to provide the following information:

- Independently audited financial statements within 90–120 days
- Interim financial statements
- Aging of accounts receivable and payable
- Analysis of overhead costs
- Equipment schedules
- Profit and loss statements
- Outline of complete bank agreements (line of credit, turnaround to collect, and so on)
- Up-to-date work-on-hand reports Comprehensive business plan, forecast, or strategy (both short-term and long-term)
- Resumes of key employees and management
- Personal and corporate indemnity

CPAs should be aware of these requirements and can be of great assistance for the small contractor in providing the information for the surety. The more upfront the contractor is with the surety, the better the relationship between the surety and the contractor. The better the relationship between the contractor and surety, the better the odds the contractor has at increasing his or her bond program.

When a surety evaluates a contractor, the surety looks for certain warning signs in order to minimize the surety's risk. Some of the risks and warnings signs for sureties are as follows:

- The contractor's accounting and financial reporting system – The surety likes receiving timely information from the contractor. The contractor's inability to produce standard financial statements and job profit or loss reports is not a strong sign for the surety.
- Turnover of personnel – The leadership of the contractor is crucial. A contractor's experience and capacity within the industry relieves the surety of certain concerns. An important consideration regarding the leadership is the contractor's successor in the event of death or disability. A plan of succession is important.
- Changes in the contractor's business – The change may be dealing with the type of construction engaged in by the contractor or it could be dealing with the size of the contracts the contractor is pursuing.
- Maximized lines of credit – This warning sign informs the surety that the contractor has nowhere else to go in the event of problems on the job. The risk of filing claims only increases that much more.
- Poor estimating and project management – The evidence of varying bid spreads of significant degrees concerns the surety that the contractor's estimating department is inexperienced or proves their lack of ability. A continual downward trend of profit fade on jobs and diminishing gross margins is of concern especially if the contractor does not have a contingency plan on improvement or the contractor lacks the balance sheet strength to overcome the negative trends.

KNOWLEDGE CHECK

1. When a surety is evaluating a contractor, what is the surety more concerned with?

    a. The contractor's financial institution.
    b. The contractor's accountant.
    c. The contractor's accounting and financial reporting system.
    d. The contractor's management.

Contract Accounting

On May 28, 2014, FASB and the International Accounting Standards Board issued joint Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, on revenue recognition to address a number of concerns regarding the complexity and lack of consistency surrounding the accounting for revenue transactions. FASB ASU No. 2014-09 is effective (as amended by FASB ASU No. 2015-14, *Revenue from Contracts with Customers (Topic 606)—Deferral of the Effective Date*), for contractors classified as public business entities, for annual reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period. Earlier application is permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period.

For contractors not classified as public business entities, ASU No. 2014-09 is effective for annual reporting periods beginning after December 15, 2018, and interim periods within annual periods beginning after December 15, 2019. These contractors may elect to adopt the standard earlier, however, only as of either

- an annual reporting period beginning after December 15, 2016, including interim periods within that reporting period, or
- an annual reporting period beginning after December 15, 2016, and interim periods within annual periods beginning one year after the annual reporting period in which an entity first applies

ASU No. 2014-09 provides a framework for revenue recognition and supersedes or amends several of the revenue recognition requirements in FASB ASC 605, Revenue Recognition, as well as guidance within the 900 series of industry-specific topics, including FASB ASC 910, *Contractors—Construction*. The standard applies to any entity that either enters into contracts with customers to transfer goods or services or enters into contracts for the transfer of nonfinancial assets unless those contracts are within the scope of other standards (for example, insurance or lease contracts).

Readers are encouraged to consult the full text of this ASU on FASB's website at www.fasb.org.

The AICPA will provide a more detailed overview of this change to the accounting for construction contracts and contractors in future revisions of this course. Appendix A is a summary of the new accounting for revenue from contracts with customers as provided for in ASU No. 2014-09.

The authoritative literature on accounting for construction contracts is Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 605-35. Note that the AICPA Audit and Accounting Guide, *Construction Contractors* is an additional useful tool to the CPA.

The most important issues that a contractor faces are the recognition and measurement of revenues and costs for uncompleted contracts. This is the more complicated area for both the accounting and audit of a contractor.

The accounting for a contract involves the following three steps:

1. Determine the profit center (that is, the contract).
2. Determine which accounting method is appropriate for the contract (percentage of completion or completed contract).
3. Apply the appropriate accounting method.

In accounting for the contract, two methods are the most common in reporting uncompleted contracts under FASB ASC 605-35:

- Percentage of completion
- Completed contract

PERCENTAGE OF COMPLETION

The use of percentage of completion is highly dependent on the ability of the contractor to make estimates. The percentage of completion method should be used in all instances where reasonably dependable estimates can be made and all of the following conditions exist:

- Contracts executed by the parties normally include provisions that clearly specify the enforceable right regarding goods or services to be provided and received by the parties, the consideration to be exchanged, and the manner and terms of settlement.
- The buyer can be expected to satisfy its obligation under the contract.
- The contractor can be expected to perform its contractual obligation.

The percentage of completion formula is as follows:

(Estimated Total Contract Price – Estimated Total Contract Costs) × Estimated Completion %
= Estimated Gross Profit to Date

COMPLETED CONTRACT

The completed contract method should be used when persuasive evidence overcomes the presumption that the contractor should use the percentage of completion method. In other words, the completed contract method is used when the contractor cannot estimate costs as a single amount, range, or loss. The completed contract may also be used when the completed contract method does not differ materially from the percentage of completion method. This may be the case for contracts that can be completed in a short time span.

Practice Pointer

The use of anything other than the percentage of completion method on the financial statements of a contractor will cause concern for the surety. The inability of a contractor to make estimates regarding the contracts entered into may imply to the surety that the contractor does not understand his or her business. This is especially the case when the contracts treated under the completed contract method are those being bonded by the surety.

KNOWLEDGE CHECKS

2. What is an appropriate method for reporting uncompleted contracts under FASB ASC 605-35?

    a. Percentage of completion method.
    b. Cash method.
    c. Straight accrual.
    d. Uncompleted contracts are not reported under FASB ASC 605-35.

3. When calculating the percentage of completion, what are the most important components?

    a. Billings.
    b. Estimates.
    c. Backlog.
    d. Unused materials.

Additional Resources for the Construction Industry

The construction industry is full of associations for both the contractor and the accountant who serves the construction industry. Some of these resources are as follows:

- Surety Information Office (SIO) is the information source for contract surety bonds in public and private construction. SIO provides free brochures, CDs and PowerPoint presentations about surety bonding to construction project owners, lenders, contractors, and design professionals.
- Associations
- Construction Financial Management Association (CFMA)
- Associated General Contractors of America (AGC)
- Associated Builders and Contractors (ABC)
- Construction Industry CPAs and Consultants Association (CICPAC)
- Practice Development Institute (PDI)

Summary

This course was designed to add to the basic understanding obtained in the prerequisite course offered by the AICPA. The construction industry is alive and well and relies heavily on the advice and expertise of the CPA. The uniqueness of the construction industry requires the CPA to gain a thorough understanding of the industry and additional tools in order to advise their contractor client to survive in this tough industry. The CPA's lack of understanding could result in a contractor's failure and a surety's losses.

Chapter 2

STRATEGIC PLANNING FOR THE CONSTRUCTION CONTRACTOR

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Identify the steps in creating a strategic plan and its applicability to a construction contractor.
- Recall the process to create annual operating and capital budgets including objective analysis of planned projects.

INTRODUCTION

Strategic planning and budgeting are key for all businesses, however, as construction contractors survive on on-going projects, they are critical for survival. This chapter will discuss both topics with a focus on contractor survival.

STRATEGIC PLANNING AND PLANS FOR CONSTRUCTION CONTRACTORS

Strategic planning is contractor's process of defining its future direction, or strategy, and making decisions on allocating its resources to pursue this strategy. It may also extend to activities for guiding the implementation of the strategy. Exhibit 2-1 details the typical contents of a strategic business plan.

Exhibit 2-1 Facets of a Typical Strategic Business Plan

A typical strategic business plan includes the following items:

- Vision statement
- Mission statement
- Core values
- Goals and objectives and key strategies
- Monitoring and follow-up
- Financial plan—budgets

Vision Statement

A vision statement is created to state why the contractor is in business.

Example 2-1 Example Vision Statement

XYZ Contractor's vision is to be the leading company in the development and construction of future environments for working, learning, and communication.

Mission Statement

A contractor's mission statement reflects a business's values and ideals its reason for being.

Example 2-2 Example Mission Statements

Example 1

To deliver high quality, cost effective projects on schedule by employing and supporting motivated, flexible and focused teams. We value the importance of our relationships and will continue to remain fair and true in our dealings with all employees, clients, vendors and partners. Our clients count on our dependability, our drive, and our integrity. We take great pride in our accomplishments and build on them every day.

Example 2

XYZ Company is dedicated to providing quality construction, technical and management services to our customers, we will strive to inherent a long term relationship with our customers based on safety, quality, timely service and an anticipation of their needs. To help fulfill this mission we will treat all employees fairly and involve them in the quality improvement process to insure responsiveness and cost effective work execution.

Example 3

Our mission is to provide our employees with an honest and helpful working environment where every employee individually and collectively can dedicate themselves to providing our customers with exceptional workmanship, exceptional service and professional integrity. Our commitment to the mission will allow XYZ Company to become not only a premier contractor, but the premier construction company in Northeast Ohio.

Notice that a vision statement and a mission statement are different. They are equally important in the makeup of a contractor's identity.

Core Values

Core values state the essence of a contractor's philosophy for achieving success. Core values provide all employees with a sense of common direction and guidelines for running a business and for day to day behavior, defining what is legal and right for the organization.

Example 2-3 Example Core Values Statement

Our core values include accountability, work ethic, safety, honesty, trust and dedication for our services provided.

Again, notice that core values, vision statements and mission statements are all different. Taken together, however, they go even further in defining a contractor's identity.

Goals and Objectives / Key Strategies

The goals and objectives of a contractor should focus on where company leaders want to be related to future markets, services, growth locations, sales, personnel, and so on. Exhibit 2-2 illustrates common goals that would be included for a contractor.

Exhibit 2-2 Common Goals of a Contractor

A contractor would commonly discuss the following goals and objectives:

- Sales goal
- Overall net profit percentage
- Geographical locations
- Potential service revenue
- New markets
- Personnel
- Technology

Sales Goals

Sales goals would be reflected in both annual sales increases over prior years and by different business segments within the company. These business segments may be by industry (highway, energy, public projects), by type of work (commercial, residential, service work, and so on) or by location.

Profit Percentage Goals

The overall profit percentage goal is really a composite of the expected return on sales broken down by the business segments discussed above. The net profit percentages will be different by segment; thus it is important to split this out so that it can be communicated to employees within each division.

Geographic Goals

Analysis of potential other geographical locations comes with both positives and negatives. We know that construction demand is strong normally where there is population growth and we must evaluate if it makes sense to attempt to move into new markets to provide construction services. A company can do this organically or by acquisition. A strategy needs to be evaluated as to whether the proper human resources can be hired and/ or transferred to a new location or whether it would be better to attempt to make a strategic acquisition.

There are pros and cons to either strategy.

Organically

Pros: Less costly upfront, can control growth and risk associated therewith.
Cons: Lack of familiarity with the market and rules and regulations. Lack of goodwill that potential acquisition may have.

Acquisition

Pros: Has established goodwill within the market, current customer base and familiarity with company's employees, assuming there is a good reputation.
Cons: Integration of acquisition in new company culture, unfamiliarity with new key employee qualifications and abilities, cost of buying the goodwill.

Potential Service Revenue Goals

Potential service revenue streams are critical to analyze for the construction contractor. Construction industry can be very cyclical and uneven in terms of revenue and profitability. Companies that can identify service lines that produce annuity stream revenues and profits can be very valuable. An example of this would be a fire sprinkler contractor who has a service and inspection division. These divisions normally aren't subject to the cycles that the construction industry is, because in this example they are required as part of governmental regulations. These can become very valuable in terms of cash flow and in terms of the value of the company when it comes time to implement an exit strategy.

New Market Goals

A company needs to continually analyze new markets that they may be able to enter and that are profitable. An example of this would be an electrical contractor who does "inside" work (that is, commercial construction contracts) who may want to examine whether they could enter the utility market to provide "outside" work which may be more profitable. To enter these markets, there has to be a thorough analysis of the cost and expertise needed to enter the new market.

Personnel Goals

Personnel goals commonly include a growth target, as well as an acquisition of skill target.

Technology Goals

Technology goals for a contractor would normally encompass targets for software, both design and architectural, as well as technology goals for internal use, such as accounting and finance technology.

MONITORING AND FOLLOW-UP

This piece is the key to a successful strategic plan. The plan itself should include a listing of who is responsible for each stage or duty within the plan, including a description on how the projected outcomes will be accomplished. It should include action plans and to-do lists and a comparison to the budgets and forecasts with a summary narrative of progress to the goal and objectives.

There should be a set number of meetings either quarterly or semi-annually to review progress.

A more detailed, revised strategic plan should be implemented every third year with the two years in between, hosting a shortened meeting where the quarterly or semi-annually review meetings are presented to the strategic planning group.

Discussion Question 2-1

Within your company or construction company client base what do you see as being the most key strategic objectives that companies are addressing?

KNOWLEDGE CHECK

1. Which is the definition of a vision statement?

    a. A detailed plan for obtaining a company's goals and objectives.
    b. A statement which states why a company is in business.
    c. A statement that outlines key core values.
    d. Not necessary in a strategic plan.

2. Which would not be a goal of a construction company in the strategic plan?

    a. Review and improve use of technology used by the company.
    b. Determine new markets they may want to enter.
    c. Revise the company's accounting policy manual.
    d. Determine if new geographical locations may assist the company in its growth.

CAPITAL BUDGETING

To start, let's define a capital budget versus an annual budget.

Capital budgeting is the process of planning capital expenditures and evaluating and selecting from a range of alternatives the best path to follow. A capital budget normally will cover several years and be broken down into several categories.

- Current capital needs – Illustrate the needs of the contractor within the next year.
- Interim capital needs – Illustrate the needs of the contractor within the next 2-5 years.
- Wish list – Illustrate the capital needs identified as desired but not currently necessary.

The capital needs are then reviewed with upper management and included in the annual cash flow forecast and operating budget.

Capital Budgeting Process

The capital budgeting process includes defining a scope and then identifying needs. When considering scope, the contractor should have polices regarding what will be include. Items that may be *excluded* include

- *de minimis* items – Contractor management should determine their policy for the capitalization of smaller items. Based on the recent repair regulations it would be suggestive that a $2,500 capitalization policy should be considered. Any purchases below this would be expensed and excluded from the capital budget process.
- job costs – Commonly items such as small tools or supplies *are* excluded from the capital budget process.
- Repair and maintenance – To conform with recent repair regulations, the contractor should identify repair and maintenance costs which are not major repairs that would extend the useful life of a piece of equipment. Costs considered major repairs would be classified as a capital item and should be part of the capital budgeting process.

The company and its key management personnel should determine their priority of capital needs as well as present a financial analysis for the reason for the capital expenditure. Normally the analysis of capital budgeting focuses on cash flows rather than profits.

Methods of Analysis

There are a variety of capital budgeting analysis methods used, but the most popular are

- payback period
- discounted payment period
- net present value
- profitability index
- internal rate of return

Payback Period

Payback period represents the amount of time required for the cash flows to regain the original cost of the investment. Example 2-4 illustrates a sample calculation.

Example 2-4 Calculation of Payback Period

Contractor A has an investment of $1,000 which will generate income of $200 per year.
$1,000 investment / $200 per year income = 5-year payback period.

The downside to this analysis is it does not include cash flow payments beyond the payback period or the time value of money. To correct for this, the discounted payback period was created.

Discounted Payback Period

This analysis takes into account the time value of money in calculating the payback period. Example 2-5 illustrates a sample calculation.

Example 2-5 Calculation of Discounted Payback Period

Contractor A has an investment of $1,000 which will generate income of $200 per year. A discount rate of 10% has been deemed appropriate.

Year	Cash Flow	Present Value of Cash Flow	Net
0	($1,000)		($1,000)
1	$200	$182	($818)
2	$200	$165	($653)
3	$200	$150	($503)
4	$200	$137	($366)
5	$200	$124	($242)
6	$200	$113	($129)
7	$200	$103	($26)
8	$200	$93	$67

Under this method, the payback period is 7.28 years rather than 5 in example 2-4. The difference would be 2.28 years.

Net Present Value

The net present value involves discounting a stream of future cash flows back to present value. The present value is in cost of the initial investment. The ending cash flow includes any salvage value at the end of the period. The net present value of the cost inflows is measured against the present value of the cost outflows. Example 2-6 illustrates the net present value method.

Example 2-6 Calculation of Net Present Value

Cap Ex = $10,000
Useful Life = 5 years
Annual return = 2500
Value of investment at end of analysis = 1000
Discount rate = 5% and 10%

Year	Investment and Salvage	Annual Return	Net Cash Flows	5%	10%
0	$(10,000)		$(10,000)	$ (10,000)	$ (10,000)
1		$ 2,500	$ 2,500	$ 2,381	$ 2,273
2		$ 2,500	$ 2,500	$ 2,268	$ 2,066
3		$ 2,500	$ 2,500	$ 2,160	$ 1,878
4		$ 2,500	$ 2,500	$ 2,057	$ 1,708
5	$ 1,000	$ 2,500	$ 3,500	$ 2,742	$ 2,173
NPV				$ 1,607	$ 98

The discount rate is an important part of the analysis. The discount rate can represent the cost to borrow money or cost of using the contractor's internal funds. It may also represent the threshold rate of return (TRR), which is the rate required by the contractor before it will move forward with a capital investment. Using the proper discount rate to achieve the required objective is critical.

If the total net number is positive, the project should move forward. If it is negative, further analysis is required.

Profitability Index

This method is computed by dividing the present value of cash inflows of the investment by the present value of the cash outflows. If it is greater than one, it is accepted—less than one, it should be rejected. Example 2-7 illustrates the net profitability method.

Example 2-7 Calculation of Profitability Method

Based on the scenario in example 2-6 the profitability index would be calculated as follows

Present Value @ 5%

$11,609/$10,000 = 1.16

Present Value @ 10%

$10,097/$10,000 = 1.01

This method is normally used for the company when two or more projects are identified that have different requirements for cash flows.

Internal Rate of Return

The internal rate of return calculation measures the rate of return from the capital investment. This calculation is based on which discount rate makes the net present value equal to zero. Example 2-8 illustrates the internal rate of return method.

Example 2-8 Calculation of Internal Rate of Return Method

Based on the scenario in example 2-6 the profitability index would be calculated as follows

Year	Project A	Project B
0	($10,000)	($10,000)
1	$2,500	$3,000
2	$2,500	$3,000
3	$2,500	$3,000
4	$2,500	$3,000
5	$2,500	$3,000
Total	$2,500	$5,000
IRR	7.9%	15.2%

Normally the company will determine the threshold IRR that it wants to determine whether to accept or reject the project. If it is comparing two different projects, it normally would take the one with the higher IRR.

Summary of Methods

Using each of the methods presented, example 2-9 illustrates an analysis of two different projects.

Example 2-9 Analysis of Two Projects

Year	Project A	Project B
0	($300,000)	($2,000,000)
1	$100,000	$600,000
2	$100,000	$600,000
3	$100,000	$600,000
4	$100,000	$600,000
5	$100,000	$600,000
Total	$200,000	$2,000,000
Payback Period	3	3.33
Discount Payback Period	3.75	4.26
Net Present Value	$79,079	$274,472
Profitability Index	1.26	1.14
IRR	19.9%	15.2%

Each of the above methods has their own advantages and disadvantages and should be reviewed and compared to the other methods when making a decision.

Remember contractors love to buy equipment and utilization must be evaluated and quantified when possible to support and measure these decisions.

Also, contractors must take into consideration that there are other factors that influence capital investment decisions such as economic conditions, growth policies, risk evaluation, and availability of funds.

KNOWLEDGE CHECK

3. Which is not a measurement tool for evaluation of a capital expenditure?

    a. Payback period.
    b. Internal rate of return.
    c. Net present value.
    d. Cost of the capital investment.

Annual Budgeting

The annual budget is the foundation for the contractor. It represents the plan on how the contractor expects the strategic plan and capital budget will translate into profitability, which then will be converted into cash flow. The budget process needs to include all departments and key personnel and can only be properly formulated after discussing, considering, and achieving consensus from all parties. Exhibit 2-3 presents key questions that should be discussed during the annual budgeting process.

Exhibit 2-3 Common Questions Asked During Budgeting

1. What are gross revenues planned or anticipated for the current year?
    a. Key items to consider here are the following:
        i. Historical numbers – how much has the company generated over the last five years and what is their growth rate. Controlled growth is critical for the successful contractor as at times they have a tendency to over extend and try to grow too fast.
        ii. Any changes to where they are trying to capture sales from a geographic standpoint.
        iii. Is there any new type of work they are attempting to get into? This can be either different projects or industries they previously have not been in or may compliment their current type of work such as a service stream of revenue.
        iv. Other operational items that need considered when projecting revenue include the following:
            - Bonding, financing, or pre-qualification capacity
            - Line of credit availability
            - Project management capabilities
            - Equipment needs and/or availability
            - Material lead times
2. What will the expected net income be and how much should be retained in the company?
    a. To determine this there must be consideration given to loan covenants, working capital needs (current and for the future), income tax consequences, and reasonable compensation.

Exhibit 2-3 Common Questions Asked During Budgeting (continued)

3. What are the fixed overhead items and costs for the company?

    a. These include all general and administrative salaries and expenses including owner's salary but should exclude bonus program based on company performance. In addition, debt service and capital expenditure amounts should be determined to determine the amount of free cash flow the company will generate.

    Free cash flow is defined as

    Net Income
    + Non-cash expenses (i.e. depreciation and amortization)
    - Principal payments or debt
    - Unfunded cap ex
    Net free cash flow

    Note this doesn't include changes in working capital which will be addressed in the cash flow forecast.

4. What is the company's typical (historical) and planned gross profit from contracts not including selling, general, and administrative costs?

    a. This needs to be broken down by type of job especially if there are variances in the gross profit percentage based upon size of contract, type of work, and so on.

5. What are the fixed (not variable) equipment costs that must be allocated to the job?

    a. These are costs that are captured under the equipment section of a company's general ledger and they are allocated to jobs based on a systematic method (i.e. hours of use, day rate, and so on)

We know that contractors, personally, at times can create "lifestyle" funding issues which can create the need for consistent and sometimes significant current cash flows to be drained from the business to support this, but we know that the construction industry by its nature is very cyclical and has very uneven cash flow production.

Since many of the construction companies are flow through entity such as limited liability corporation or S-corporation, the distribution for these items needs to be evaluated as follows:

- Income tax distributions – are the required payments that the shareholders must make as a result of the income reported on their personal tax returns. Because there are significant book versus tax differences, there also should be an amount of cash "restricted or appropriated" for taxes due in the future as a result of various tax deferrals that a contractor has based on their tax accounting methods elected.

- Profit distributions – are distributions given to the owners that are a result of current and prior year's profits and may reflect the cash flow needs of the owner. These distributions should also be used to increase net worth for the owner outside the business.
- Profit retention – amount of after tax profits the company has determined it wants to retain in the company for bonding, stability, and future growth.

Once these and the questions presented in exhibit 2-3 are answered then a detailed budget can be prepared. In addition, these questions show a good summary at an executive level of the financial goals of the company. An executive summary of a sample annual budget is presented in example 2-10.

Example 2-10 Sample Executive Summary

Gross Revenue	$30.0 million
Net Income	$2.5 million
Fixed Overhead	$3.0 million
Gross Profit	18.3%
Annual Expense Costs	$1.0 million

Note that the key figures are summarized.

As changes are made, this executive summary can be updated as part of the company's monthly financial reporting package.

To prepare a detail budget the company needs to begin with the opening work-in-process and backlog gross profit balances, taken from the prior period, to determine the amount of sales backlog and backlog gross profit it has under contract. This amount then is subtracted from the gross profit projected in the annual budget to determine the "new business" that needs to be generated to meet the budget. Example 2-11 provides a scenario calculation.

Example 2-11 Calculation "New Business" Needs

Backlog sales: $10 million

Backlog projected gross profit: $2 million

Note that all backlog work is expected to be completed in the current year.

If depreciation is the only non-cash expense and it is $0.5 million, annual debt service is $0.8 million and unfunded capital expenditures are $0.3 million the company can calculate the free cash flow.

	New Business	Forecast	Under Contract
Gross Revenue	30.0	10.0	20.0
Gross Profit	5.5	2.0	3.5
Fixed Overhead	3.0		
Projected Net Income	2.5		
+ Depreciation	.5		
- Debt Servicing	(.8)		
- Capital Expenditures	(.3)		
Free Cash Flow	1.9		

In this example, the contractor projects to have $1.9 million in free cash flow, assuming its projections are correct.

The company then must budget all items below the gross profit line including salaries, payroll taxes, employee benefits, rents, utilities, insurance, interest, travel, office supplies, and so on. In addition, at this point in time, they can also recalculate the equipment allocation costs to ensure the allocation methods and amounts are reasonable based on the historical over/ under absorption in prior years.

The process will help keep the company focused on its financial goals and measure progress towards achieving them.

KNOWLEDGE CHECK

4. The annual budget normally doesn't include which?

    a. Equipment costs.
    b. Discretionary bonus plans.
    c. Projected revenues.
    d. Fixed overhead (billing, general, and administrative costs).

5. To determine a company's gross profit for budget purposes, what should they look at??

    a. Industry averages and historical trends.
    b. Historical trends only.
    c. Backlog gross profit and historical trends.
    d. Industry averages, historical trends, and backlog gross profit.

Chapter 3

INTERNAL CONTROLS FOR THE CONTRACTOR

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall specific areas over which internal controls are critical for construction contractors.
- Identify specific controls that are effective in mitigating the significant risks present in the construction industry.

INTRODUCTION

Auditors are required to obtain an understanding of the internal control structure on every audit engagement. Such an understanding is needed in order for auditors to effectively plan the audit engagement. The understanding is obtained for the following reasons:

- Identify types of potential misstatements – As an auditor you should have an understanding of what kinds of errors can occur. Unless you know what kinds of errors can happen, you will not know what to look for.
- Consider factors that affect the risk of material misstatement – An understanding of the contractor's internal control structure will highlight those areas that are most likely to be wrong.
- Design substantive tests – The understanding of the internal control structure will let you know what documents you should be looking for and where in the accounting process the errors are most likely to occur.

In addition to the requirements established by generally accepted auditing standards as it relates to internal control, clients often rely on auditors to assist them with the establishment of internal control policies and procedures.

What Are Internal Controls

AU-C section 315, *Understanding the Entity and Its Environment and Assessing the Risks of Material Misstatement* identifies internal controls as:

> A process effected by those charged with governance, management, and other personnel that is designed to provide reasonable assurance about the achievement of the entity's objectives with regard to the reliability of financial reporting, effectiveness and efficiency of operations, and compliance with applicable laws and regulations. Internal control over safeguarding of assets against unauthorized acquisition, use, or disposition may include controls relating to financial reporting and operations objectives.

At times, accountants get too caught up in defining internal controls as procedures that are put in place to protect the theft of cash or the prevention of fraud. It is true that internal controls assist in accomplishing these issues, but for a business, internal controls are much broader than those defined by most auditors. Every company has processes and procedures that must be performed in order for the company to succeed and grow. If a $5 million organization has policies and procedures in place that are appropriate for a $50 million organization, then that $5 million organization has a strong foundation to grow and to expand much more rapidly than most of its counterparts. On the other hand, if a $50 million organization has the same policies and procedures in place as that of a $5 million organization, then that organization may be more likely to experience issues and will likely be less able to identify or recover from those failures.

Many times smaller entities will not have extensive documentation of controls. Sometimes there may be no documentation. The reason why most small entities do not have such controls documented is mostly due to time and priorities set by the company. However, the problem with lack of documented policies, procedures, and internal controls is guidance. Such policies and procedures will allow employees of organizations to understand their job, their purpose for being an integral part of the company, and direction to where the company is heading.

KNOWLEDGE CHECK

1. Which is considered an interrelated component of internal control?

    a. Organizational structure.
    b. Control environment.
    c. Management's philosophy and operating style.
    d. Number of employees dedicated to internal controls.

Controls Specific to Construction Contractors

This chapter is not designed to cover all the internal controls a company should have in place. Instead, we will look at controls that are very unique to the construction contractor. This discussion is positive for both the financial manager of a construction company and the auditor of a construction contractor.

The discussion and subsequent questionnaire is not applicable to every contractor. The environment in which an internal control system operates is dictated by the company implementing the system. The entity's size, complexity, and type of work performed will drive the controls necessary to have implemented and operating effectively. The controls that we will discuss as it applies to contractors are as follows:

- Estimating and bidding
- Project administration and contract evaluation
- Job site accounting and controls
- Billing procedures
- Contract revenues
- Equipment
- Contract costs
- Payroll

ESTIMATING AND BIDDING

The most important phase of a contract is at the very beginning – the phase where the contractor decides to take on a particular project within a particular region and for a particular price. Once the decision has been made, the estimating and bidding process begins. Controls must be in place in the estimating and bidding phase, or the contractor will be incurring losses before the contract ever begins.

In establishing controls over bidding and estimating, the contractor should consider the following items as they relate to the contract:

- The estimates should be based on contract specifications and drawings to ensure that the estimates of contract costs include all cost elements.
- Prices and quantities should be received from reliable sources.
- Prices obtained from subcontractors are reliable and preferably bonded, depending on significance and complexity of work being performed.
- Comparison and verification of labor rates used in the estimate to actual union contracts or Davis-Bacon rate required in the contract or to other documentation supporting labor rates, payroll taxes, and fringe benefits.
- Final estimates should be reviewed for clerical accuracy.
- An independent review should be performed to ensure completeness and reasonableness.
- The estimate should be prepared in a form consistent with the cost coding system used by the contractor's accounting system.
- A recalculation of burden rates should be performed to ensure proper allocations are included, based on work being performed.
- Equipment costs should be reviewed by appropriate personnel to determine if equipment needs can be handled internally or if external sources will need to be sought.
- Overall bid reductions should be approved by appropriate management.

Practice Pointer

A general rule of thumb stated by most contractors estimating a project is the phrase "job is at cost plus 10 and 10." The "10 and 10" is the estimate for 10 percent profit and 10 percent overhead. See our chapter on burden rates and overhead calculations as it discusses how an estimator should understand the implications of "10 and 10."

The following questionnaire may be helpful in understanding and documenting procedures and controls over contract bidding and estimation.

Bidding and Estimating Control Questionnaire			
	Yes	**No**	**N/A**
Bidding and Estimating			
A. Control Objective: Completeness and accuracy of the contract bid			
1. Controls are in place to ensure that all bid items are included (for example, preprinted forms).			
2. Detailed estimate sheets are produced to support the estimate summary, and periodic reviews are in place.			
3. Estimating department uses the same overhead calculations and accounting codes serve as the basis for the job cost system.			
4. Controls are adequate to ascertain that all bid sheets are double-checked for mathematical accuracy and bid item completeness as compared to the customer specifications.			
5. Cost estimates are obtained from more than one subcontractor, with performance and bid bonds required as appropriate.			
6. Controls exist to ensure that the quantities of materials, hours of labor, and estimated equipment costs in the bid are complete and accurate.			
7. The final bid estimates are reviewed and approved by designated management personnel.			
8. Bid results are analyzed for potential problems (for example, too much "left on the table").			

Bidding and Estimating Control Questionnaire			
	Yes	**No**	**N/A**
B. Control Objective: Completeness and accuracy of estimated costs to complete			
9. Controls function to ensure that the cost accounting system provides a basis for the periodic comparison of actual and estimated costs.			
10. Reviews exist to verify that quantities and prices of all significant elements of cost are identified in estimating total contract costs.			
11. Estimating procedures ensure that the estimated costs to complete include the same elements of costs that are included in actual accumulated costs.			
12. Estimates of cost to complete are reviewed periodically and revised as appropriate to reflect new information.			

PROJECT ADMINISTRATION AND CONTRACT EVALUATION

Project management and contract evaluation are essential in determining the status or progress of a contract and the profitability or lack of profitability during the life of the project. Timely reports from the field and information derived from the accounting department are necessary in order for project management to make decisions affecting the project.

Regularly scheduled meetings with project managers and accounting personnel enhance the effectiveness of project administration and allow for the timely review of the status for each project. Items and issues commonly discussed at these meetings include specific items such as the following:

- Change orders – Status, approval, pricing, and identification of appropriate documentation.
- Correspondence between owner and contractor – Issues that have been identified and resolutions addressed.
- Job cost records – Identification of cost reports allows identification of cost issues that may be potential missed change orders or misallocated costs. Do not wait until after job ends to determine errors.
- Subcontractors – Status of performance and ability to complete job. Discussion on payments.
- Material usage and outstanding orders – Assure correct materials are properly scheduled and compared to estimated costs to complete.

Contract evaluation and review are critical prior to entering into a contract. Payment provisions, retention issues, liquidated damages, regulatory requirements, and other items may have a significant impact on the entity. These items must be addressed by the entity prior to signing the contract. If not, the entity is obligated; and commonly, revisions to the contract are difficult.

Items to consider in determining internal controls over project administration and contract evaluation are as follows:

- Timely and reliable progress, cost, and status reports on each contract are provided to management on a frequent basis.
- Meetings are scheduled with project managers to enhance the effectiveness of the project.
- Job reports are reviewed to determine that revisions are made relating to revised cost estimates or change orders that may have been incurred.
- Individual contracts are reviewed in detail by management and periodically reviewed by legal counsel.

The following questionnaire may be helpful in understanding and documenting procedures and controls over project administration and contract evaluation.

Project Administration and Contract Evaluation Control Questionnaire			
	Yes	**No**	**N/A**
Project Administration			
A. Control Objective: Completeness and accuracy of the contract status.			
1. Project management communicates with field personnel to ensure that subcontractor and performance are accurate with invoices submitted.			
2. Project management communicates with accounting and field personnel to determine accuracy of job profit status reports.			
3. Project management communicates with estimators and compares actual costs to budgeted costs on a phase-by-phase basis.			
B. Control Objective: Completeness and accuracy of contract.			
4. Contracts with subcontractors are evaluated by legal counsel on at least an annual basis to ensure compliance with state laws and regulations.			
5. Out-of-the-ordinary contracts are reviewed by legal counsel prior to signing to protect the entity from unusual clauses.			
6. Master contracts entered into by the entity are reviewed by all departments to determine if all direct costs, reimbursable costs, and overhead items are properly included.			

JOB SITE ACCOUNTING AND CONTROLS

At times, a contract may be taken on by a contractor that justifies establishing an accounting office on the job site. Typically, these jobs are either endured over a long period of time or are located outside of the contractor's geographic region.

The assigning of accounting duties on the job site creates a number of internal control concerns for the contractor. For instance, several of the following issues may arise at a job site:

- Accounting staff may be needed on site. This accounting staff may be temporary or training may be very limited as to the duties being performed.
- Projects may be taken on outside of the contractor's local area, which could mean the contractor must hire laborers from outside his or her normal labor pool. That could potentially cause human resource issues or loyalty concerns.
- Laborers may demand to be paid in cash, increasing the risk of theft, or they may be inclined to misappropriate material because there is less of a relationship with the contractor.

Due to these and other risks around job sites, the contractor should ensure that certain policies and procedures are in place to minimize the likelihood that any accounting irregularities will occur. Controls that should be implemented are as follows:

- Physical controls should be established over small tools, equipment, and materials to prevent loss by pilferage or unauthorized usage.
- Controls over the hiring and dismissal of employees to prevent phantom employees from being used as a means for misappropriation of assets
- Establish accounting procedures to require a specific level of management to authorize material and small tool purchases and to specify receipt of such small tools and materials.
- The accounting department should maintain effective supervision over the job site offices.

The sample questionnaire, included in the following discussion of contract and payroll costs, may be helpful in understanding and documenting procedures and controls over job site accounting.

BILLING PROCEDURES

The billing procedures in the construction industry are very unique and unlike any other industry. Most industries will bill when goods are shipped or shortly after services are rendered. In the construction industry, the billing procedures vary widely, based upon the requirements of the contract. Whatever the requirements, controls and accounting procedures must be in place to facilitate the billing process and therefore safeguard and improve the entity's cash flows.

Due to the complexity and unusual nature of the billing process within the construction industry, it is very important that certain procedures be followed. The following items should be addressed when establishing procedures and controls over the billing process

- Procedures and controls should be in place to ensure that billings are made in accordance with the contract, and they should be designed to recognize unique contract features.
- Controls should be in place to address appropriate retention provisions. Such controls should address the appropriate billings in the event the retainage is reduced after a certain percentage of the contract is complete.

- For time and material contracts, billing procedures should be in place to ensure that the contracted rates are assigned to the appropriate cost codes and the billing reflects the different work performed.
- Procedures should be in place to enact necessary filings of liens at the time of each billing to provide assurance that lien rights are protected before they expire.

A sample of an internal control questionnaire as it relates to the billing procedures follows the discussion on contract revenues.

CONTRACT REVENUES

The concern with contract revenues for contractors relates to providing reliable information in order to produce the proper amount and timing of contract revenue. The types of controls established depend on the method of revenue recognition used.

Many contractors account for their revenue recognition on the accrual method based upon their billings and their incurred costs. In certain situations, one may see contractors maintain their books on a completed contract method. Smaller contractors may report revenues under the cash method. Whatever method used by the contractor during normal operations, it is important that the method used to report for year-end purposes be incorporated into the monthly and quarterly financial reporting process. In most instances, generally accepted accounting principles require that the percentage of completion method be used for financial reporting for contractors.

Due to the special billing practices unique to the construction industry combined with the varieties of revenue recognition, the following items should be addressed when determining controls and procedures:

- Timely preparation and supporting documentation for the preparation of estimates under each contract in progress
- Process in order to facilitate approved change orders
- Provide for notification of contract adjustments, cancellations, or postponements.
- Implement the appropriate method, which the company will adopt as their revenue recognition.
- Procedures in place in order to properly determine the various components to ensure accurate calculation of the percentage of completion
- Proper reconciliation of contract revenues and billings to the general ledger
- Procedures in place to accumulate reimbursable costs under cost-plus and time and material contracts

The following questionnaire may be helpful in understanding and documenting procedures and controls over the billing, collection, and revenue recognition for a contractor.

Billing, Collection, and Revenue Recognition Control Questionnaire			
	Yes	**No**	**N/A**
Contract Revenues, Cash Collections, and Accounts Receivable			
A. Control Objective: Completeness and accuracy of contract revenues and performance of services			
1. All projects are performed on the basis of a signed contract between the owner and the contractor.			
2. The owner's creditworthiness and ability to pay and satisfy obligations are reviewed and properly evaluated prior to the contract acceptance.			
3. Contract administration procedures are adequate to ensure that all risk factors associated with the construction contract are properly evaluated and that proper documentation and other procedures are in place to limit contract liability.			
4. Mechanisms are in place (formal or informal) to evaluate the proper method of revenue recognition for the project.			
5. Controls are in place to ensure that the estimated costs to complete or any other input method of estimating percentage complete, which determines the extent of progress toward completion and ultimate realizable profit and loss, is accurate.			
6. The company's estimating procedures are adequate in providing reasonable assurance of a continuing ability to produce reasonably dependable estimates.			
7. The system of control provides assurance that invoices and monthly progress billing are prepared, properly recorded, and reviewed by the project manager prior to submittal to the project owner.			
8. The monthly progress billing is checked for the accuracy of quantities, prices, extensions, and terms.			
9. There are adequate controls to ensure that progress billings are billed according to the contract (that is, retainage and withholdings) and reconciled regularly to the recorded accounts receivable.			
10. For the percentage of completion method of revenue recognition, the differences between the accrued billings and percentage-complete revenue are investigated on a timely basis.			

Billing, Collection, and Revenue Recognition Control Questionnaire			
	Yes	**No**	**N/A**
B. Control Objective: Completeness, existence, and accuracy of cash collections			
11. Only authorized persons, with no conflicting duties, have access to cash receipts data files, programs, and related records.			
12. Lockboxes are used when appropriate.			
13. Persons handling remittances are independent of the billing, accounting, and cash disbursement functions.			
14. Restrictive endorsements are placed on checks received, and all receipts are controlled and deposited intact daily.			
15. Receipts of cash payments are controlled (for example, pre-numbered receipts).			
16. A control listing of daily cash receipts is forwarded to a person independent of handling remittances and accounts receivable detail functions.			
17. Entries to the cash receipts journal are compared with the deposits per the bank statement and the initial control listings by a person independent of the cash receipts and accounts receivable functions.			
18. Cash receipts data are processed completely and accurately in the proper accounting period, and rejected entries are followed up on a timely basis.			

Billing, Collection, and Revenue Recognition Control Questionnaire			
	Yes	**No**	**N/A**
C. Control Objective: Completeness, existence, and accuracy of noncash credits to receivables and back charges to the subcontractors			
19. Only authorized persons, with no conflicting duties, have access to credit memo data files, programs, and related data.			
20. Credit memos are properly approved and matched with the original project invoices.			
21. Credit memos are controlled (for example, by pre-numbering), and missing documents are investigated on a timely basis.			
22. Persons who approve the credit memos are independent of the cash receipts and credit functions.			
23. Credit memo data are processed completely and accurately in the proper accounting period, and rejected entries are resolved on a timely basis.			
24. The company establishes and maintains control over back charges to provide reasonable assurance that such items are properly documented and to provide for the accumulation of related revenues and costs.			

Billing, Collection, and Revenue Recognition Control Questionnaire			
	Yes	**No**	**N/A**
D. Control Objective: Appropriate valuation of trade and retainage receivables			
25. Responsibilities and procedures are established to review the monthly aging of past-due accounts and to follow up on delinquent accounts and unusual items on a timely basis.			
26. Valuation allowances, write-offs, and other adjustments to customer accounts are properly approved.			
27. Accounts receivable and retainage receivable balances written off are subject to memorandum control and are investigated periodically by persons independent of the cash receipts and credit memo functions.			
28. Credit balances in the accounts receivable subsidiary ledger are investigated periodically by persons independent of the cash receipts and credit memo functions.			
29. The accounting records account separately for retainage receivable and trade accounts receivable, and the retainage balances outstanding are reviewed monthly to ascertain compliance with contract provisions and collectability.			
30. Unbilled work is reviewed monthly by the project manager to ascertain if billing will occur in the subsequent month, and any unbilled accounts not subsequently billed are investigated by the project manager.			

Billing, Collection, and Revenue Recognition Control Questionnaire			
	Yes	**No**	**N/A**
E. Detective Controls			
31. Monthly billings are sent to project owners, and reported discrepancies are resolved on a timely basis.			
32. The accounts receivable subsidiary ledger is reconciled monthly to the general ledger.			
33. Bank statements are reconciled monthly to the general ledger.			
34. Reconciliations of the accounts receivable subsidiary ledger and bank statements are reviewed and approved by an appropriate level of management.			
35. Unusual unbalanced items are reviewed monthly by the project managers and investigated.			
36. Unusual low gross margins are reviewed monthly by the project managers and investigated.			

EQUIPMENT

Equipment is one of the most significant costs a contractor can incur on a project, especially in the heavy highway industry. However, many equipment-intensive contractors have a difficult time accounting for the costs of the contractor's equipment. The accounting for equipment includes both external costs (such as equipment rental) and internal costs (such as fuel, repairs, depreciation, interest, and so on).

Although accounting for the costs is highly important, utilization and loss prevention can be equally or more important. An idle dozer or excavator on one job may mean an incurrence of a significant expense on another job. Costs are incurred on both jobs when one could essentially be eliminated by properly managing equipment.

The loss of small tools and equipment are typically charged to jobs and not properly accounted for. The lack of oversight with regards to small tools and equipment can prove to be costly for the contractor as well. Inventory and accountability procedures must be enforced in order to minimize losses for the contractor.

The following questionnaire may be helpful in understanding and documenting procedures and controls over equipment.

Equipment Control Questionnaire			
	Yes	**No**	**N/A**
Equipment			
A. Control Objective: Completeness, existence, and accuracy of equipment purchases			
1. An equipment plan has been developed and is periodically reviewed and updated based on equipment needs.			
2. Only authorized persons, with no conflicting duties, have access to purchasing data files, programs, and related records.			
3. Purchase orders are properly approved.			
4. A master file or listing of approved suppliers is maintained.			
5. Procedures are established to control changes and update information included on the master file or listing of approved suppliers.			
6. Responsibilities and procedures are established to approve purchase orders in excess of established limits.			
7. Persons who perform the purchasing function are independent of preparing vouchers for payment, receiving, project management, cash receipts and disbursements, and accounting functions.			
8. Purchase orders are controlled (for example, by pre-numbering), and missing documents are investigated on a timely basis.			
9. Open purchase orders are followed up on periodically.			

Equipment Control Questionnaire			
	Yes	**No**	**N/A**
B. Control Objective: Completeness, existence, and accuracy of processing of equipment charges to the projects			
10. Equipment rental rates and charges to the projects are reviewed periodically to ascertain recovery of all equipment costs (that is, depreciation) and for compliance with company policy.			
11. Time charges for equipment usage and idle equipment charges (if applicable) are properly approved.			
12. Rental charges are account coded by job phase and reviewed periodically for appropriate distribution to project cost detail.			
C. Control Objective: Completeness, existence, and accuracy of the equipment ledger			
13. Project equipment is monitored and inspected periodically and reconciled to the equipment sub ledger by project.			
14. All equipment received from the project sites is physically controlled by an appropriate employee requiring a receiving report.			
15. All equipment transferred from the project sites is physically controlled by an appropriate employee, and transfers are properly documented.			
16. Physical inventory of equipment is periodically performed, and the results are compared with the equipment ledger to verify its completeness.			
17. Maintenance procedures are evaluated for proper capitalization and posting to the equipment ledger.			
18. Idle project equipment is continually monitored and controlled to ascertain its recoverability through current established rental rates.			

CONTRACT COSTS

There are several reasons for comprehensive procedures and controls over contract costs, including:

- Controlling costs
- Determining and monitoring the status and profitability of contracts
- Facilitating contract billings

In order to meet this threefold purpose, the following items should be considered:

- Costs should be accumulated and compared to estimates determined during the bidding process.
- Costs should be categorized into appropriate and simplified categories such as labor and burden, materials, subcontracts, equipment, and so on.
- Establish an approval process through a purchase order system.
- Information flow to management to evaluate the reasonableness of the contract costs as compared to the physical determination.
- Procure subcontract costs for work performed and compare to the agreed-upon contract entered into at time contract was awarded.
- Review subcontract files to ensure that all proper performance and guarantee bonds have been received.
- Compare internal and external equipment costs charged to jobs to determine propriety and reasonableness.
- Approval of back charges, extras, and claims and provide communication if such costs should be passed down to parties that are responsible.
- Review labor hours and charges made to jobs and compare to estimates.

The following questionnaire may be helpful in understanding and documenting procedures and controls over contract costs.

Contract Costs Control Questionnaire			
	Yes	**No**	**N/A**
Contract Costs and Related Accounts			
A. Control Objective: Completeness, existence, and accuracy of purchases of goods and services and costs charged to construction projects			
1. The job-cost system accumulates direct and indirect costs by project to facilitate comparisons of actual costs with budgeted costs.			
2. Controls exist to ensure that a responsible official orders materials in accordance with the contract specifications and that materials are requisitioned on a timely basis. A predetermined number of bids are required for purchased materials and services.			
3. Purchase orders are properly approved.			
4. A master file or listing of approved suppliers is maintained.			
5. Procedures are established to control changes and update information included on the master file or on the listing of approved suppliers.			
6. Responsibilities and procedures are established for the approval of purchase orders in excess of established limits.			
7. Persons who perform the purchasing function are independent of preparing vouchers for payment, receiving, shipping, project management, cash receipts and disbursements, and accounting functions.			
8. Purchase orders are controlled (for example, by pre-numbering), and missing documents are investigated on a timely basis.			
9. Open purchase orders are reviewed periodically.			
10. Purchasing data are processed completely and accurately in the proper accounting period, and rejected entries are resolved in a timely manner.			

Contract Costs Control Questionnaire			
	Yes	**No**	**N/A**
11. Only authorized persons, with no conflicting duties, have access to receiving data files, programs, and related records.			
12. Goods received are counted, inspected, and matched to approved purchase orders.			
13. All uninstalled materials stored at projects or home office warehouses are physically controlled and safeguarded.			
14. Procedures are established to prevent payment (or recover payment, if made) of rejected goods, over-deliveries or short deliveries, price differences, and returned goods.			
15. Persons who perform the receiving function are independent of preparing vouchers for payment, purchasing, shipping, cash receipts and disbursements, and accounting functions.			
16. Receiving reports are controlled (for example, by pre-numbering), and missing documents are investigated on a timely basis.			
17. Receiving data are processed completely and accurately in the proper accounting period, and rejected entries are resolved on a timely basis.			
18. The financial ability of subcontractors is reviewed, and bonding and other insurance requirements are determined prior to award of subcontracts.			
B. Control Objective: Completeness, existence, and accuracy of cash disbursements and processing of material and subcontract invoices			
19. Only authorized persons, with no conflicting duties, have access to supplier invoice data files, programs, and related records.			
20. Persons who prepare vouchers for payment are independent of the purchasing, receiving, shipping, cash receipts, and check-signing functions.			

Contract Costs Control Questionnaire			
	Yes	**No**	**N/A**
21. Invoices are approved by responsible employees and matched with approved purchase orders and receiving reports prior to payment and differences are resolved on a timely basis.			
22. Invoices are account coded by job phase and reviewed for appropriate distribution to the project costs detail.			
23. Suppliers' invoices for material purchases are checked for accuracy (for example, mathematical extension, proper freight charges, and discounts) prior to payment.			
24. Invoice data are processed completely and accurately in the proper accounting period, and rejected entries are resolved on a timely basis.			
25. All subcontractor progress billings are reviewed for propriety commensurate with job progress.			
26. Only authorized persons, with no conflicting duties, have access to cash disbursement data files, programs, and related data.			
27. Persons who sign checks are independent of preparing vouchers for payment, purchasing, receiving, shipping, cash receipts, and accounting functions.			
28. Persons who sign checks are presented with approved supporting vouchers for comparison and inspection.			
29. Checks are mailed directly after being signed by persons independent of preparing vouchers for payment, purchasing, receiving, shipping, cash receipts, and accounting functions.			
30. Persons who operate the check-signing machine and maintain custody of the keys and plate are independent of the voucher and check- preparation functions.			

Contract Costs Control Questionnaire			
	Yes	**No**	**N/A**
31. Supporting documents for cash disbursements are properly canceled under the control of the check signer immediately after checks are signed by persons independent of preparing vouchers for payment.			
32. Cash disbursements data are processed completely and accurately in the proper accounting period, and rejected entries are resolved on a timely basis.			
33. Persons who have access to unissued checks are independent of the check-signing function.			
34. Spoiled checks are properly voided to prevent use.			
35. Bank accounts and check signers are properly authorized (for example, by the board of directors).			
36. Responsibilities and procedures are established to approve interbank transfers.			
37. Imprest funds are available to routine recurring payments (for example, payroll and petty cash).			
38. Responsibilities and procedures are established to approve disbursement and reimbursement of imprest funds.			
C. Detective Controls			
39. Unpaid vouchers or accounts payable subsidiary ledgers are reconciled monthly to the general ledger, and reconciliations are reviewed and approved by the appropriate staff.			
40. Statements received from material suppliers are reconciled to the unpaid vouchers or accounts payable subsidiary ledgers, and differences are resolved on a timely basis.			

Contract Costs Control Questionnaire			
	Yes	No	N/A
41. Underbillings and overbillings are reviewed monthly by the project managers for potential unrecorded subcontract costs, timing of owner billings or receipt of subcontract estimates, and so on.			
42. Cost overruns and underruns from budget are reviewed monthly by project management (verifies cost coding, and so on).			
43. Bank statements are reconciled monthly to the general ledger, and reconciliations are reviewed and approved by the appropriate staff.			
44. Stale checks are investigated periodically, and stop-payment notices are issued and recorded if appropriate.			
45. The job costs detail is reconciled periodically to the general ledger.			

PAYROLL COSTS

Much like equipment, labor costs may be one of the most significant costs incurred by a contractor. Due to the commonly high turnover that owners face in the construction industry, the controls over payroll are essential to minimize the possibility of employee-related fraud. In addition to concerns over fraud, controls over payroll are also critical for properly accounting for each particular job, phase, and type of work that is being performed by the employee.

The following questionnaire may be helpful in understanding and documenting procedures and controls over payroll costs.

Payroll Costs Control Questionnaire			
	Yes	**No**	**N/A**
Payroll and Related Costs			
A. Control Objective: Completeness, existence, and accuracy of processing of employee payroll			
1. Only authorized persons, with no conflicting duties, have access to payroll and employee benefit data files, programs, and related records.			
2. New hires, compensation rates, and employee benefits are properly approved.			
3. Written authorizations for withholding exemptions and voluntary payroll deductions are obtained from employees.			
4. Master file or listing of employee data used to prepare payroll (for example, name, position, compensation rates, employee benefits, and payroll deductions) is maintained.			
5. Procedures are established to ensure that changes and updated information to the master file or listing of employee data are used in preparing payroll.			
6. Variable data used to calculate gross pay are properly approved and reviewed for compliance with applicable labor agreements.			
7. Payroll and employee benefit data are processed completely and accurately in the proper accounting period and accurately distributed to project cost detail, and reject entries are resolved on a timely basis.			

Payroll Costs Control Questionnaire			
	Yes	**No**	**N/A**
B. Control Objective: Completeness, existence, and accuracy of payments of employee payroll			
8. Only authorized persons, with no conflicting duties, are permitted access to payment data files, programs, and related records.			
9. Independent payoffs, employee identification, and similar procedures are performed at project sites to ascertain that all persons are valid employees.			
10. Imprests are used for payroll disbursements.			
11. Payrolls are properly approved before distribution of payroll checks.			
12. Persons who distribute the payroll checks are independent of personnel, payroll preparation, and development or approval of data used for payroll preparation (for example, time records).			
13. Responsibilities and procedures are established for preparation and filing of payroll tax returns and payment of accumulated withholdings and related accrued taxes.			
C. Detective Controls			
14. Employee compensation records are reconciled to control accounts.			
15. Differences reported by employees are investigated on a timely basis by persons independent of the payroll preparation function.			
16. Payroll bank accounts are reconciled monthly to the general ledger.			
17. Labor distribution reports are reviewed by the project manager or job foreman prior to the job- cost updates. Adequate controls exist to ensure that labor has been distributed accurately based on the time records.			

KNOWLEDGE CHECKS

2. Which internal control process applies specifically to contractors?

    a. Estimating and bidding.
    b. Financial reporting.
    c. Budgeting.
    d. Under-budget projects.

3. Which control is better when considering internal controls at the job site?

    a. Reporting proper estimated costs to complete to accounting.
    b. Controls over invoices and monthly progress billings are prepared.
    c. Controls over the hiring and dismissal of employees.
    d. Controls over the estimating process.

4. Why are billing procedures in the construction industry unlike most other industries?

    a. The billings vary based upon the requirements of the contract.
    b. The billings are based when goods are shipped or when services are rendered.
    c. The billings are weekly.
    d. The billings are not unlike most other industries.

Summary

Many businesses can get by with a simple internal control structure; a contractor cannot. The uniqueness of the contractor demands more from an internal control system than most industries. This is mostly due in part to the decentralization of operations and the focus on the individual profit centers. Each contract can be represented as its own entity within an entity.

The adviser to the construction industry should be very aware as to the unique characteristics those in the industry face. In order to be an effective adviser to the construction client, the issues we have discussed in this chapter should be reviewed with management. The adviser to the contractor may not fully understand all the controls and their implications to the contractor. However, an open discussion with management regarding these implications over key areas affecting the contractor will provide a start in formalizing an ensuring internal control structure.

Chapter 4

FRAUD AND THE CONTRACTOR

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall the significant considerations of AU-C section 240, *Consideration of Fraud in a Financial Statement Audit* with regards to construction contractors.
- Identify additional areas of test work prescribed by AU-C section 240.

INTRODUCTION

AU-C section 240 has been one of the most significant auditing standards promulgated by the AICPA. The introduction of AU-C section 240 does not change our responsibility as it relates to fraud, but it does have a significant impact on our procedures performed in assessing the risk as it relates to fraud and our audit clients. AU-C section 240 has an impact on all our audit clients and is very critical to those who audit the construction industry.

According to the 2014 ACFE Report to the Nation on Occupational Fraud and Abuse, the construction industry ranked third in median fraud losses per scheme at $245,000. It is estimated that U.S. organizations lose 5 percent of their annual revenues to fraud and that small businesses suffer.[1]

[1] 2014 Report to the Nation on Occupational Fraud and Abuse. Copyright 2014 by the Association of Certified Fraud Examiners, Inc.

It should be noted that two of the most common types of fraud are (1) the misappropriation of assets – a theft of entity assets usually by employees, but can involve management, that is driven by opportunity and (2) fraudulent financial reporting – intentional misstatements in financial statements usually by management that is driven by incentive.

Practice Pointer

Although AU-C section 240 lists two types of fraud, the Association of Certified Fraud Examiners adds a third type of occupational fraud – corruption. Corruption involves the wrongful use of influence in a business in order to procure some benefit for themselves or another person. Examples include, but are not limited to, (1) conflicts of interest involving sales or purchases, (2) bribery involving bid-rigging or invoice kickbacks, (3) illegal gratuities, and (4) economic extortion.

AU-C Section 240, *Consideration of Fraud in a Financial Statement Audit*

AU-C section 240 addresses the auditor's responsibilities relating to fraud in an audit of financial statements. Specifically, it expands on how AU-C section 315, *Understanding the Entity and Its Environment and Assessing the Risks of Material Misstatement*, and AU-C section 330, *Performing Audit Procedures in Response to Assessed Risks and Evaluating the Audit Evidence Obtained*, are to be applied regarding risks of material misstatement due to fraud.

The bottom line: Expect to perform detailed work in every audit under this AU-C section in both identifying and responding to the risk of material misstatement due to fraud.

Practice Pointer

Clients sometimes assert that the CPA should have caught embezzlement by an officer or employee of the client's company, and juries tend to believe such assertions. Even services that are not intended to detect errors or fraud are not immune to these assertions. The best loss prevention is to document your understanding with the client. To do that the author recommends two types of letters to clients.

First, an engagement letter should confirm

1. The objectives and nature of the engagement;
2. Report(s) the accountant expects to render;
3. Limitations of the engagement (such as not including internal control evaluation);
4. Responsibilities of the CPA; and
5. Responsibilities of the client (or its management).

Second, an advisory letter should

1. Warn the client about the general risks involved in an audit;
2. Suggest steps the client can take to reduce the risks; and
3. Offer annual CPA services to help reduce the risks.

A significant number of lawsuits have resulted from CPAs not advising clients about what they should or should not do.

KNOWLEDGE CHECK

1. Under AU-C section 240, which of the following statements is true?

    a. AU-C section 240 has changed the auditor's responsibility as it relates to planning, detecting, and reporting on fraud in the audit of financial statements.
    b. The auditor should expect to perform more work in every audit under AU-C section 240 in both identifying and responding to the risk of material misstatement due to fraud.
    c. AU-C section 240 now requires the auditor to specifically look for fraud and make a separate report on their findings.
    d. AU-C section 240 now holds the auditor responsible for detecting all fraud.

Identification of Certain Fraud Risks

Management's Ability to Override Controls

AU-C 240 highlights the unique position of management to perpetrate fraud because of its ability to manipulate accounting records and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively. Although the level of risk of management override of controls will vary from entity to entity, the risk is, nevertheless, present in all entities. Because of the unpredictable way in which such an override could occur, it is a risk of material misstatement due to fraud. Thus, it is a significant risk.

For most contractors the ability to override controls is very prevalent. Many small contractors do not have the accounting staff necessary to prevent or detect such override. Mid-size to large contractors' ability to override controls may be dictated by management's style and attitude toward the financial reporting process. By its nature, management override of controls can occur in unpredictable ways.

AU-C section 240 provides the following guidance in designing a response to management's ability to override controls:

- Examine journal entries and other adjustments. – Test the appropriateness of journal entries recorded in the general ledger and other adjustments made in the preparation of the financial statements, including entries posted directly to financial statement drafts.
- Review accounting estimates for biases. – Review accounting estimates for biases and evaluate whether the circumstances producing the bias, if any, represent a risk of material misstatement due to fraud.
- Evaluate the business rationale for significant unusual transactions. – Evaluate—for significant transactions that are outside the normal course of business for the entity or that otherwise appear to be unusual given the auditor's understanding of the entity and its environment and other information obtained during the audit—whether the business rationale (or the lack thereof) of the transactions suggests that they may have been entered into to engage in fraudulent financial reporting or to conceal misappropriation of assets.

Examine Journal Entries and Other Adjustments

When determining the approach for examining adjustments to the financial statements, the auditor should obtain an understanding of the entity's financial reporting process and the controls one has over such adjustments. However, our risk is dealing with management that has the ability to override such effective controls.

The auditor should use professional judgment in determining the nature, timing and extent of testing the journal entries and other adjustments. In doing so, the auditor should consider

- The assessment of risk of material misstatement due to fraud;
- The effectiveness of controls over journal entries;
- The entity's financial reporting process and the nature of the evidence that can be examined;
- The characteristics of fraudulent adjustments;
- The nature and complexity of the accounts; and
- Adjustments processed outside the normal course of business.

Cases in Point

Contractor A

Contractor A is a good, reputable small contractor. He has been in business for a number of years and has been very successful. He has a good backlog and has a good relationship for bonding purposes. Contractor A has poor accounting systems and accounting assistance. Access to the computer system is allowed to the owner, bookkeeper, and project managers or estimators. Project managers or estimators receive bonuses based project performance.

Contractor B

Contractor B has been a strong contractor but has fallen on hard times in the past two years. His volume has gone from $30 million to $10 million in two years. His surety has turned him down on bidding recent jobs out of concern for his company's performance and lack of working capital. Contractor B's accounting staff is adequate and supportive of the company and believes in the owner's ability to return them to "better days" in the construction market.

What risk factors may exist relating to management's ability to override the system for Contractor A and Contractor B?

Contractor A

Our concern regarding the type of fraud in this example would be the misappropriation of assets. The risk of project managers or estimators should be a concern for the auditor and the owner. The opportunity to manipulate costs from various projects is a very large risk. The project managers or estimators may want to "smooth" or increase gross profits on certain completed jobs in order for management to receive large project bonuses. Also, concern lies with the bookkeeper. The ability to manipulate the system and conceal such manipulative transactions through the use of journal entries may prove devastating to the auditor.

Contractor B

Our concern regarding the type of fraud in this example would be fraudulent financial reporting. The owner's mindset of returning to the "better days" of construction may provide some form of rationalization to manipulate the financial statements. The pressure of the ability to bond has been set forth by the surety in turning Contractor B down on recent jobs. We should be concerned about the opportunity the owner may have to adjust the financial statements. A simple entry to increase working capital and net income would be a fraudulent representation to the surety that the auditor must be concerned with.

Practice Pointer

Data extraction software is ideal in searching the detail of any audit client. By specifying certain criteria, an extraction of significant or unusual transactions or adjustments can be found extremely quickly. In using such software with a contractor, one must understand how the system works. Adjustments to the job cost module of a software package may allow the perpetrator a "back door" to the general ledger. The auditor must obtain an understanding of the company's system to properly design the approach to testing such risks.

Reviewing Accounting Estimates for Biases

AU-C section 240 states, "Fraudulent financial reporting often is accomplished through intentional misstatement of accounting estimates." The use of estimates in the preparation of financial statements is key in the construction industry, and no other industry relies on estimates as heavily. Estimates of gross profit and of costs to complete on jobs in progress drives the formula for revenue recognition through percentage of completion. Because of this, auditors should be aware of biases made by management in deriving the estimates for financial reporting purposes.

The review of estimates on jobs in progress should always be a standard audit procedure in the audit of a construction company. Many practitioners refer to this as a profit or fade analysis. The profit or fade analysis allows the auditor to review jobs in progress in the prior audit period and compare their status to the current period. If the job is complete in the current year, we can determine how accurate the estimate was for the prior year. If the contract is still in progress, the profit or fade analysis allows us to inquire as to any variance made in the project from year to year.

Such an analysis can be segregated for greater effectiveness. The segregation can be broken down by

- contract type;
- contract size;
- project manager;
- estimator;
- geographic region; and
- other areas specific to the company.

By aggregating the analysis according to the criteria previously listed, the auditor can benchmark the contractor's current performance to his or her historical performance in these specific areas. The profit or fade analysis should be incorporated into the contractor's permanent file working papers as well as the current year working papers.

Based on the profit or fade analysis and a comparison to the entity's historical performance, the auditor may identify contracts worthy of additional examination. This identification should lead the auditor to design procedures to determine if those contracts with variances are being reported correctly.

Evaluate the Business Rationale for Significant Unusual Transactions

During the normal course of an audit, the auditor may become aware of significant transactions that are not in the normal course of business. Such material transactions need to be reviewed to allow the auditor to understand the purpose and business rationale for the transaction.

In gaining an understanding for transactions such as these, the auditor should consider

- whether the form of such transaction(s) is overly complex;
- whether management has discussed the nature of and accounting for such transactions with the audit committee or board of directors;
- whether management is placing more emphasis on the need for a particular accounting treatment than on the underlying economics of the transaction;
- whether transactions that involve unconsolidated related entities, including special purpose entities, have been properly reviewed and approved by the audit committee or board of directors; and
- whether the transactions involve previously unidentified related parties or parties that do not have the substance or the financial strength to support the transaction without assistance from the company under audit.

REVENUE RECOGNITION

Material misstatement due to fraudulent financial reporting related to revenue recognition often results from an overstatement of revenues through, for example, premature revenue recognition or recording fictitious revenues. It may also result from an understatement of revenues through, for example, improperly shifting revenues to a later period.

Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 605-35 discusses three different accounting methods:

- Percentage of completion
- Completed contract
- Zero profit

One must keep in mind that the determination of which method to use is dependent upon the circumstance of the contractor. The three methods are not acceptable alternatives for the same circumstance.

This course is not intended to provide an in-depth discussion of the methods allowed under FASB ASC 605-35. However, an auditor must be aware that the alternatives do exist, and the selection of which alternative a contractor uses is based on the underlying circumstances and not by choice of the contractor.

In most cases, the percentage of completion method of accounting will be the method that applies to most contractors' circumstances. In order to properly recognize revenue under percentage of completion, one must understand the percentage of completion equation and ensure that all parts of the formula have been properly accounted for. The formula is presented as follows:

$$(\text{Estimated Total Contract Price} - \text{Estimated Total Contract Costs}) \times \text{Percentage Complete} = \text{Gross Profit to Date}$$

The auditor's response to fraud risk, will consider all of the components that make up the equation.

Estimated Total Contract Price

The auditor should design procedures with regard to the contract price and any modifications. Such modifications include

- change orders;
- contract options and additions; and
- claims.

Estimated Total Contract Costs

The auditor should design procedures to ensure that costs associated with that contract are included and accounted for properly. The auditor must consider

- precontract costs;
- direct costs;
- labor and equipment burden allocations;
- back charges;
- indirect costs such as equipment, small tools, and general and administrative overhead burden allocations; and
- estimated cost to complete (subject to estimates made by management that we discussed earlier regarding management's override of controls).

Percentage Complete

Whatever method is used to determine percentage complete, it should be used consistently across all contracts entered into by the company. The methods mostly used are as follows:

- Cost to cost
- Efforts expanded
- Units of delivery

Practice Pointer

One might think that all of this is being done during the audit of a contractor. That mindset is exactly right. The audit of a contractor should be a contract approach, not the traditional balance sheet approach. Under the balance sheet approach, the issue of revenue recognition is treated as secondary to the balance sheet. With a contractor, the revenue recognition is based on the reporting of contracts and estimates on contracts in progress. Therefore, the response to revenue recognition for a contractor will be addressed under the common audit approach of construction companies … through the contracts.

Exhibit 4-1 Areas of Focus for Construction Contractors

The following are additional areas of concern for construction contractors and how the fraud may be committed.

Fraud in Fixed Price Contracts

- Quality and scope of work
  - Specified quality materials not used
  - Contract quantities not installed
  - Specified services not provided
  - Unapproved alternates unilaterally implemented
  - Contract work performed by others
- Contract overcharges
  - Allowances not properly adjusted
  - Performance bonds or insurance not obtained
  - Contract price improperly includes sales tax
  - Owner provided materials not properly credited

Fraud in Unit Price Contracts

- Quantities billed exceed quantities performed
- Measurement methods don't reflect the basis for unit prices
- Excessive work performed and billed
- Quality of work doesn't meet specifications
- Labor and burden rate billed exceed actual

Fraud in Cost Plus Contracts

- Subcontract costs
- Labor costs
- Burden costs
- Material costs
- Equipment costs
  - Owner
  - Rentals
- Insurance allocation

Fraud in Change Orders

- Charge orders not priced per contract terms
- Hourly labor return and burden billed exceeded actual wages and burden
- Charge order markups incorrectly applied
- Charge orders paid but included in scope of the contract
- Charge order price proposals inflated
- Improper charges for overtime
- Material prices used for pricing exceed actual costs due to trade discounts
- Quantity estimates inflated
- Quantity estimates do not reflect deleted items

KNOWLEDGE CHECK

2. Under AU-C section 240 auditors are required during the audit of a contractor to design procedures and make an assessment in order to

    a. Assess the contractor's internal controls over bidding and estimating contracts.
    b. Assess the contractor's ability to override controls.
    c. Assess the contractor's internal control documentation of controls that are implemented.
    d. Assess the contractor's number of internal controls.

REQUIRED BRAINSTORMING SESSION

AU-C section 240 calls for a "brainstorming" session among audit team members. Simply put, the brainstorming session is an exchange of ideas among peers. This exchange should focus on the two types of fraud: fraudulent financial reporting and the misappropriation of assets.

In order for the brainstorming to be effective, team members most familiar with the client are required to attend the brainstorming session. In the case of a construction contractor, the audit team discussion should involve a member very familiar with the construction environment. A team member's insight into the current market conditions, type of contracts being audited, use of the financial statements, and other valuable information would add to the effectiveness of the brainstorming session.

For an effective brainstorming session, the conversation should include the following people:

- *Engagement partner* – Provides status of client, conversations held throughout year, issues that may exist outside of company that would affect the company, discussions and reports sent to surety, and so on.
- *Engagement manger* – Provides insight on procedures performed in past, new generally accepted accounting principles changes, any discussions with client or management personnel held during the year, areas susceptible to fraud, and so on.
- *Industry specialist* – Provides insight as to industry status, insight on local, regional and national impact on contractor, and so on.
- *Supervisors and staff* – Provide insight on prior year procedures, problems encountered, alternative testing, and so on.

Do not overlook the benefit the young staff can provide. Many courses focusing on fraud and methods in how fraud may occur are taught today in colleges and universities. A young staff may bring fresh, new ideas into a mundane brainstorming session.

Practice Pointer

A separate time sheet code should be maintained in a CPAs time keeping program to support their brainstorming session. The separate coding could prove helpful, not only to peer review, but also in a court of law.

AU-C section 240 states that communication among the engagement team members about the risks of material misstatement due to fraud should continue throughout the audit, particularly upon discovery of new facts during the audit.

An exchange of ideas at the planning stage would guide the audit team toward performing certain procedures. A brainstorming session during fieldwork would be beneficial to make the team aware of matters discovered while performing procedures discussed in the planning stage. A final brainstorming session subsequent to fieldwork would provide the audit team insight from a final, overall picture of the audit report being delivered.

INCREASED INQUIRY

In the Report to the Nation on Occupational Fraud and Abuse the Association of Certified Fraud Examiners (ACFE) noted the following as it relates to the detection of fraud:

Source of Detection	2014	2012
Tip	42.2%	43.3%
Internal audit	14.1%	14.4%
Accident	6.8%	7.0%
Internal controls	26.3%	37.1%
External audit	3.0%	3.3%

Notice that tips are still the best source of detecting frauds, catching nearly three times as many frauds as any other form of detection. It is great to see that internal controls have increased over the past few years in detecting the fraud. Organizations are understanding that fraud is steadily rising and in tight financial times, internal controls must be strictly enforced to minimize efforts. It is noteworthy to mention that 11 percent of frauds were detected through channels that lie completely outside of the traditional anti-fraud control structure: accident, police notification, and confession. In other words, 11 percent of the time, the victim organization either had to stumble onto the fraud or be notified of it by a third party in order to detect it. Even though that is a sad fact, the positive turn on this fact is that such a source has decreased over the past few years.

It is amazing that the number one way that fraud was detected in the entities studied by the ACFE was from tips. To look further at this issue, look at where the sources of the tip originated:

Source	2014	2012
Employees	49.0%	50.9%
Customer	21.6%	22.1%
Vendors	9.6%	9.0%
Anonymous	14.6%	12.4%

The result of these findings indicates that the increased emphasis on inquiry is vital to our AU-C section 240 performance.

AU-C section 240 requires that the auditor should inquire of management and others about

- management's knowledge of any fraud or suspected fraud affecting the entity;
- management's awareness of allegations of fraud or suspected fraud affecting the entity received, for example, in communications from employees, former employees, analysts, regulators, short sellers, or others;

- management's understanding about the risks of fraud in the entity, including any specific fraud risks the entity has identified, or account balances or classes of transactions for which a risk of fraud may exist;
- entity's establishment of programs and controls to mitigate specific fraud risks the entity has identified, or that otherwise help to prevent, deter, and detect fraud, and how management monitors those programs and controls;
- for an entity with multiple locations, (*a*) the nature and extent of monitoring of operating locations or business segments and (*b*) whether there are particular operating locations or business segments for which a risk of fraud may be more likely to exist; and
- management's communication to employees its views on business practices and ethical behavior.

Practice Pointer

Contractors may not have multiple locations; therefore, the auditor may bypass this questioning regarding multiple locations. However, the auditor should be aware that large, significant jobs may be handled by the entity as a separate location and carry with it the potential material misstatement caused by fraud.

Even though the items previously outlined mention management in many of the fraud risk inquiries, the new standard requires that such inquiries be made of management *and others*. No longer can the auditor rely strictly on discussions with the owner and the controller regarding fraud risk matters. Auditors must expand their discussions to those outside their typical fraud discussion arena.

Due to the nature of the construction industry, these fraud risk discussions could pertain to many different parties, based on the type of construction work being done by the contractor. A list of those parties that may be involved in our discussions may include but are not limited to the following:

- *Owners and controllers* – The importance of our discussions with the owner and controller has not changed from SAS No. 82. These two parties are extremely important in evaluation the risk of material misstatement of fraud.
- *Project managers* – Project managers will provide the most insight relating to how a job may be progressing. The selection of which project managers should be included would be dependent upon the projects ongoing at year-end or on a rotation basis.
- *Estimators* – Discussions with estimators can provide insight that counters our discussions with project managers. Estimators may also provide insight relating to upcoming work and the success on recent bids. They may also provide insight regarding profit margins that were bid on work that is in progress at year-end.
- *Equipment managers* – Equipment managers should be spoken to regarding items related to equipment for a heavy or highway contractor. Inquiries may relate to condition or life of equipment. Do we have impairment issues? Discussions relating to equipment burden calculations may be deemed useful. Also, the discussion with equipment managers may relate to tools used on jobs. Are there misappropriation issues with small tools or other equipment?
- *Human resources* – Human resources may provide insight regarding labor or union relations. Discussions may reveal a lack of labor pool for upcoming projects. Discussions may reveal high turnover of key personnel that may not be discussed by owners or other management.
- *Subcontractor administration and clerks* – The use of subcontractors for large and general contractors may be significant. Many times these contractors will have a clerk employed to deal with the relations and billings handled by subcontractors. These clerks may provide helpful insight into disputes regarding work-on-hand or previously completed that has not been revealed.

The auditor's inquiries of management *and others* within the entity are important because fraud often is uncovered through information received in response to inquiries. Such interviews provide the participant an opportunity to convey to the auditor facts and circumstances that may otherwise not be communicated during the course of the audit.

The auditor should be aware of the responses received from the parties queried. Making similar inquiries of different respondents regarding the same issue may send a signal that fraud is present.

Case in Point

The auditor makes an inquiry about Big Job One to the project manager. The project manager brags about how well the job is going and states that the project will be complete at the gross profit percentage represented by the controller's job schedule. The auditor then makes an inquiry of the estimator regarding the same contract. The estimator is shocked at how high the gross profit is being reported. The estimator informs you that the project was taken at a gross profit percentage of 6 percent instead of the 13 percent reflected. Based on the conflict with these inquiries, the auditor would design substantive procedures to determine why the gross profit went from 6 percent to 13 percent. Such procedures would include reviewing (possibly with the estimator) the estimated versus actual job cost report to determine the phase or phases within the job that varied from the estimator's estimates.

KNOWLEDGE CHECK

3. In an effort to increase the effectiveness of inquiries under AU-C section 240, the auditor should discuss the contract schedule provided during the audit of a contractor with the

    a. Controller.
    b. Project management.
    c. Owner.
    d. Surety

EXPANDED USE OF ANALYTICAL PROCEDURES

The use of analytical procedures in the planning and performing an audit is governed by AU-C section 520, *Analytical Procedures*. Analytical procedures are used to identify the existence of unusual transactions or events, and amounts, ratios, and trends that might indicate matters that have financial statement and audit planning implications.

The results of analytical procedures allow the auditor to compare the amounts, ratios, and trends to identify unusual or unexpected relationships. When unusual or unexpected relationships occur, the auditor should consider those results in identifying the risks of material misstatements due to fraud.

AU-C section 240 also requires the use of analytical procedures in relation to revenue. Analytical procedures must be designed with the objective of identifying unusual or unexpected relationships involving revenue accounts that may indicate a material misstatement due to fraudulent financial reporting.

Analytical procedures an auditor might want to consider that may indicate a risk of material misstatement due to fraud are found in AU-C section 240 as follows:

- *Net income to cash flows from operations* – An unusual relationship may indicate that management recorded fictitious revenues and receivables but was unable to manipulate cash.
- *Inconsistent changes among inventory, accounts payable, sales, or cost of sales from prior period to current period* – These inconsistent changes may indicate possible employee theft. The inconsistencies result from the employee being unable to manipulate all of the related accounts.
- *Comparing entity's profitability to industry trends* – Management cannot manipulate the industry trends.
- *Comparing bad debt write-offs to industry trends* – Such difference in industry trends may indicate possible employee theft of cash receipts. Employees cannot manipulate industry trends.
- *Unexplained or unexpected relationship between sales volume and production statistics* – If the results of production and cost of sales does not handle the volume of sales recorded, management may be manipulating one side of the accounting process.

Practice Pointer

Even though you are allowed some flexibility in determining which risk factors to consider, use caution when deciding that some of the risk factors do not apply. Expect questions to be raised if a material misstatement due to fraud is discovered in the entity's financial statements and several of the example fraud risk factors previously listed were identified during your audit, but you decided not to consider them as possible indicators of fraud.

Additionally, the auditor may consider the following additional ratios:

- Days sales in receivables index – Calculate days in receivables for the current period. Compare that to the same calculation for the immediate prior period. A ratio of 1:1 indicates that the days sales in receivables has held steady between the two periods. If receivables are beginning to become large in relation to sales, that may be a sign of fraudulent revenue recognition. For a contractor, one should also consider the amount of receivables at the end of a period compared to the amount of work-on-hand at the end of the period. If receivables are large and little work is on hand, the auditor should question if the receivables relate to retainage and the collectability of such receivables.

- Gross margin index – Compare gross margin for the current period to that for the immediate prior period. In this instance, look for a ratio that is less than 1:1, which indicates gross margins are deteriorating for the entity. Declining margins may indicate a lack of financial stability or profitability, providing management with an incentive to fraudulently misstate the financial statements. For a contractor, the overall gross margin should be compared to the gross margins being reported on the schedule of jobs on an individual contract basis. Unusual or unexpected margins should require further procedures.
- Asset quality index – Asset quality is the ratio of noncurrent assets exclusive of property, plant, and equipment to total assets in any given year. The asset quality ratio measures the ability of the company to produce reliable earnings in the future. The higher the proportion of noncurrent assets to total assets, the greater the risk to the company of losing future earnings growth. When the ratio of current-year asset quality to prior-year asset quality is greater that 1:1, that means more costs are being capitalized and deferred, which could be a sign of fraudulent earnings manipulation.
- Sales growth index – This is the ratio of current-year sales to prior-year sales. For a contractor, the sales growth index may fluctuate greatly from one year to the next. However, the sales growth indicator should require the auditor to examine and document the projects that attributed to the fluctuation. For contractors who have contracts and service work (that is, electrical contractors, HVAC, and so on) or different contract types, the sales growth index should be calculated for the different segments within the entity for greater effectiveness.
- Total accruals to total assets – This is a measure of changes in noncash working capital to total assets at the end of the current period. Start with working capital (excluding cash). Determine year-to-year change in this amount. Divide this amount into total assets at the end of the period. A large result indicates that a growing percentage of the entity's working capital comprises noncash items, which is a sign of possible fraudulent financial reporting. Any calculation that deals with working capital should be done for a contractor. The importance that working capital plays in the construction industry leads to incentive and pressure for fraudulent financial reporting.

Exhibit 4-2 Additional Fraud Mitigation Techniques

The following are additional areas of concern for construction contractors and how the fraud may be committed.

1. Anti-fraud controls – develop control procedures and behaviors that are implemented to prevent these items from occurring and detect them if they do.
2. Set expectations regarding behavior and make sure they are communicated—the company needs employees, vendors, customers, and so on. to know what is allowable behavior as well as which is considered misconduct. Employees need to know the rules about reporting financial and other performance items. Vendors and customers must know the policy on gifts and entertainment as well as penalties for violations. The company may want to attach their "Code of Conduct" to vendor and customer agreements.
3. Tone at the top – the attitude and behavior by top company personnel must reflect the proper behavior. All must adhere to company policies and if violated the consequences need to be uniformly administered.
4. Policy on suspected misconduct – all employees need to know their role and the proper reporting mechanism when there is suspected misconduct. An actual policy or procedure should be considered for development and communication to all levels
5. Suspected violations – company should encourage suspected violations to be reported. This should be mandatory and include periodic sign off by managers and employees that they are not aware of any violations. Companies may want to consider doing this on an annual basis.
6. Historical record - companies should keep a list of all previous fraudulent losses and then develop periodic monitoring procedures to ensure there are not repeat violations.
7. Risk analysis for fraud activities – the company should consider creating a list of fraud areas, including what could go wrong. From here, prevention and detection procedures should be developed to minimize the risk. The company may want to consider publishing these results to show that they are monitoring and reviewing high exposure areas.
8. Fraud skill training – the company may consider developing a training program for employees to let them know how to prevent, detect, and report fraud.
9. Professional skepticism – employees, managers, and auditors all need to approach their duties with a degree of professional skepticism. When doing their daily duties, they should pay attention to the internal controls around their duties related to documents and reports they handle, review carefully any exception reports, and notice any unusual changes in behavior or processes from individuals or departments they interact with.
10. Have a fraud response team ready to go if a fraudulent activity is discovered and needs further work or investigation.

Key Point

General recommendations for fraud prevention include entities

- having an internal control system, including monitoring.
- qualifying contractors, vendors, and consultants through a pre-qualification process and due diligence.
- avoiding those who have had problems in the past.
- requiring a code of ethics, gift and entertainment policies to be included in contracts to mitigate corruption.
- requiring a right to audit outside parties you contract with and auditing them as appropriate.
- conducting a fraud awareness project on a periodic basis.

Summary

Auditors have a clear responsibility to obtain reasonable assurance that material misstatements due to fraud are not present in financial statements. This chapter highlighted major issues for construction contractors in the statement which

- requires discussions among engagement team members regarding the risks of material misstatement due to fraud and the importance of an appropriate mindset of professional skepticism; and
- expands the sources of information obtained to identify risks of material misstatements due to fraud. Specifically, auditors would be required to gather information about fraud risks by taking the following actions:
    - Conducting team member discussions and brainstorming about fraud risks and professional skepticism
    - Making inquiries of management and others within the entity
    - Considering the results of analytical procedures performed in planning the audit
    - Considering fraud risk factors
    - Considering certain other information obtained when conducting the audit

Chapter 5

CASH MANAGEMENT FOR THE CONTRACTOR

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Identify the significant sources of cash for construction contractors, and the benefits and drawbacks of each.
- Identify the importance of a contractor being aware of and in control of future cash flows and techniques for estimating future cash flow.
- Recall practices that may assist a construction contractor to improve or better manage current and future cash flow.

INTRODUCTION

Cash is king! A statement that is true in many industries, but for none as true as it is for the construction industry. Ask any surety, bond agent, accountant, or contractor, and they will all tell you the importance of cash when evaluating a contractor's financial statements. These users of the financial statements calculate a number of different cash ratios in evaluating a contractor's financial strength. The ratios commonly calculated and their desired thresholds include:

- Non-borrowed cash greater than 20 percent of equity
- Cash equal to or greater than overbillings
- Days in receivables less than 45 days
- Days of revenue in cash greater than 10

Cash management is an important key to a contractor's success. Cash management is often defined as the process of documenting, organizing, planning, and controlling the creation, collection, investment, and disbursement of cash. In order to have a successful cash management system in place, one must include all personnel and all aspects of operations. To truly achieve this, dialogue and communication with all appropriate personnel is critical.

Practice Pointer

Cash management is critical to the contractors. When one observes the construction industry, it is clear that the construction industry typically operates off low gross margins and participates in a highly competitive market. The industry mostly comprises of gross margins of 4–12 percent, billing cycles of 30 days, and retainage provisions in amounts higher than the gross margins anticipated to be received. A contractor who does not take cash management into consideration for his or her organization is shortsighted and does not consider the long-term capabilities of his or her company.

KNOWLEDGE CHECK

1. Which of the following is generally considered the more valuable by a surety when evaluating a contractor's financial statement?

    a. Cash.
    b. Inventory.
    c. Prepaid expenses.
    d. Revenues.

Sources of Cash for the Contractor

It is important to understand the sources of cash flow for the contractor. These sources include:

- Profitable jobs – The most obvious and best source for cash comes from the success of the business. Due to the nature of the contractor's business it is important that they are aware that the cash obtained from a successful job should not be diminished or exploited by the company. The need for future cash may be the very next job. Also, the proper billing and disbursement practices on projects will add to the cash success of the company.
- Equity contributions –In times of need, an owner's equity contribution can help meet the immediate cash needs of the company and provide equity to the company, increasing the company's overall bond program.
- Loans from owners – Loans from owners may meet the immediate cash needs of the company, but they may also create issues for bonding purposes. The injection of cash into the company has a neutral impact for bonding purposes. If this option is used, it may be more beneficial from a bonding perspective to term the debt to the owner over a 2–3 year period of time. By doing so, the company excludes the long-term portion of the debt from the working capital calculation. In this situation the surety will request that the debt be subordinated to them.
- *Outside financing* – A contractor may look to a line of credit, financing, or lease-versus-buy options on equipment. However, terms for such options are dictated by outside sources, making this the least favorable avenue for a source of cash. Factoring receivables, refinancing equipment debt, and other alternatives should be explored.

Practice Pointer

One area that a CPA can benefit the contractor is assisting in the decision regarding the previously mentioned sources of cash. We will review the monitoring of cash regarding jobs in this chapter. Many smaller contractors need assistance in determining how sources of cash related to their business should be handled. Also, a CPA's external relationships and understanding with outside financing sources may prove very helpful to their contractor client.

KNOWLEDGE CHECK

2. Which of the following sources of cash generally has a higher priority to a surety?

    a. Loans from owners.
    b. Outside financing.
    c. Loans from family members.
    d. Sales of assets.

Contractor Cash Flow

General and Administrative Expenses

The cash management process should be implemented in every phase of a project, and it begins with proper budgeting of a contractor's overhead for the year. The contractor's appropriate budgeting of general and administrative expenses is important because it identifies the contractor's break-even point for the year. It allows the contractor to control overhead costs that can get abused when a company is having a profitable year and also serves as an early warning sign as to the position of the company when jobs are not being won. The knowledge and understanding of a company's general and administrative expenses are informative tools used in estimating because they help to identify what the entity should be allocating to its bids for overhead and profit.

Job Cash Flow

In order to properly manage cash flows for jobs, one must understand that each construction project is its own, individual profit center. Because of this, a contractor should review the cash projection of a job in its early stages—commonly, even prior to bidding. The contractor may want to assess various issues such as the following:

- Current work and backlog on hand – If the contractor has an abundant amount of work on hand and the company's resources are fully used, what additional costs may arise to handle the job? The contractor should be concerned with this question not only at the time of preparing the estimate, but also when given the notice to proceed.
- Owner of the contract – What is the financial stability of our customer? What are the payment practices of the owner (especially when talking about a subcontractor with a general)?
- Geographic location and type of work – Wage rates may vary. What would be the cost of mobilization to a place out of our vicinity? What part does weather at a particular area play in our contract regarding timeliness of completion of work?
- Contract clauses – What are the penalty and incentive provisions, retainage provisions, or billing specifications and payment terms within the contract?

Once the auditor is satisfied that the various questions which may have arisen in reviewing it's the determination of bidding on the contract have been answered, the auditor should then look at the actual inflows and outflows of the contract. Typical cash receipts and disbursements on a job are as follows:

- Cash receipts
    - Billings, less retentions
    - Retentions – Keep in mind if retentions may be collected in part prior to completion.
    - Claims and change orders – Some contractors bid work with the mindset that certain change orders will occur.
- Cash disbursements
    - Bid costs
    - Preconstruction costs – Engineering costs, mobilization, bonds, permits, and so on
    - Labor – Including labor burden such as payroll taxes, workers' comp, and so on

- Materials and supplies
- Subcontractors – The timing of retainage payments should follow the timing of collecting retainage receivables.
- Overhead

Using this review of receipts and disbursements, a cash flow analysis can be created to dig deeper into the health of the contractor.

Practice Pointer

Overhead may be determined in a number of different ways. The contractor may want to use a percentage of the revenues generated (not collected). Determine the monthly "true cash" overhead and divide over jobs in progress projected for that month. The advisor should assist the contractor in determining the most effective and most practicable allocation for the contractor.

CASH FLOW ANALYSIS

Cash flow analysis is putting pen to paper and determining what the projected cash flows would be. A contractor would normally complete a cash flow analysis on a quarterly basis at least, however, completing the analysis on a monthly basis would provide more timely and relevant results. Further, a monthly analysis may provide more comparative and clear results as the effects of potential weather or seasonal issues may be reduced. For larger contractors, a weekly analysis of cash flow may be necessary.

An example of an individual job-projected cash flow follows:

Phantom, Inc.

Projected Cash Flows: Big Job 3 (Individual Project)

Year Ending December 31, 2016

	Jan-16	Feb-16	Mar-16	2nd Qtr 16	3rd Qtr 16	4th Qtr 16	YTD Totals
Jobs in Progress							
Big Job 3							
Disbursements							
Materials	12,500	45,000	30,000	25,000	85,000	100,500	298,000
Subcontractors	—	7,500	65,000	75,000	35,000	150,000	332,500
Labor and burden	4,000	20,000	25,000	25,000	25,000	45,000	144,000
Other	15,000	20,000	25,000	30,000	40,000	55,000	185,000
Total	31,500	92,500	145,000	155,000	185,000	350,500	959,500
Billings	30,000	110,000	150,000	165,000	265,000	345,000	1,065,000
Less retainage	(3,000)	(11,000)	(15,000)	(16,500)	(26,500)	(34,500)	(106,500)
Add retain due						53,250	53,250
Net cash receipts	27,000	99,000	135,000	148,500	238,500	363,750	1,011,750
Net cash flow	(4,500)	6,500	(10,000)	(6,500)	53,500	13,250	52,250
Cumulative cash flow	(4,500)	2,000	(8,000)	(14,500)	39,000	52,250	

This analysis provides management insight as to the anticipated cash flow needs in the event that this job is awarded to the auditor's client. Notice the anticipated needs of cash for this particular job. During January, March, and the second quarter, the job does not produce adequate job flow. Furthermore, the Company made a strategic move by including a provision in its contract requesting that half of its retainage be disbursed prior to contract completion. This provision is evidenced by the receipt of 50 percent of the retainage receivable in the fourth quarter of 2016.

Notice that the projected cash flow on the individual project does not take into consideration any overhead calculations. Instead, the analysis strictly examines the cash flow requirements from Big Job 3. Such an analysis should be done for each job the Company wishes to be awarded. These individual projected cash flow analyses should be combined with a company-wide job portfolio to determine the overall effect to the Company.

This schedule is an example of such a company-wide job portfolio:

Phantom, Inc.

Projected Cash Flows: Company Wide

Year Ending December 31, 2016

	Jan-16	Feb-16	Mar-16	2nd Qtr 16	3rd Qtr 16	4th Qtr 16	YTD Totals
Jobs in Progress							
Big Job 1							
Net cash flow	2,500	85,500	73,500	(63,500)	88,636		186,636
Big Job 2							
Net cash flow	36,500	79,000	(7,500)	37,500	(17,500)	(69,743)	58,257
Big Job 3							
Net cash flow	(4,500)	6,500	(10,000)	(6,500)	53,500	13,250	52,250
Company Overhead	(60,500)	(60,500)	(60,500)	(181,500)	(181,500)	(181,500)	(726,000)
Period cash flow	(26,000)	110,500	(4,500)	(214,000)	(56,864)	(237,993)	(428,857)
Cum. cash flow	(26,000)	84,500	80,000	(134,000)	(190,864)	(428,857)	

In this company-wide analysis, several items should be addressed with the client:

- The month of January may be relatively tight. The contractor should be sure to have available cash reserves or additional resources to float the entity into February. The entity may want to consider having discussions with lenders about borrowing funds in December or January.
- Beginning the second quarter of 2016, it should be noted that the contractor's backlog begins to deplete and the need to secure work to begin in the second quarter becomes very important.
- Depending on the market outlook for Phantom, management may want to address minimizing overhead expenses as they enter the second quarter of 2016.
- Big Job 3 was taken at an extremely low margin of true costs (approximately 5 percent). The contractor may want to check with an estimator to ensure that proper profit and overhead allocations are being factored into our bid.

The cash flow analysis will not prevent cash flow problems from occurring, but it will provide the contractor better information. The cash flow analysis will inform the client of "tight" times ahead and allow the contractor time to prepare for any cash shortfalls.

To maximize the benefit from cash management, the contractor must integrate the project management philosophy with his or her cash management philosophy. The knowledge of changes of circumstances within a job should not only be reflected within a job's profit and loss report but also in an updated cash flow projection. Various software packages available to contractors will automate this process if management elects to do so.

PRACTICES TO IMPROVE CASH MANAGEMENT

The following section of the chapter provides techniques to analyze and improve cash management for a construction contractor client. These techniques include

- Monitoring cash flows by job
- Evaluating the owner of the contract
- Considering billings
- Dictating change orders and punch lists
- Improving collections
- Monitoring overbillings and underbillings
- Managing retainage
- Managing customer relations
- Reviewing banking arrangements

Monitor Cash Flow by Jobs

Using the information in exhibit 5-1:

- Reflect and observe the highs and lows in cash flow that a job can bring to the contractor.
- Determine what impact an individual job can have on the overall company.

Note that the use of percentage of completion in determining the current status of a job is for accrual purposes. However, when you remove the "accrual" aspect from the job schedule, you will reveal the cash flow implication brought about by the job to the overall entity.

Exhibit 5-1 Post Analysis of POC Jobs to Cash Performance

Calculation of Percentage Completion:

	Contract Amount	Estimated Cost of Contract	Estimated Gross Profit	Gross Profit %	Costs To Date	Contract Revenue Earned	Amount Billed To Date	Under Billing	Over Billing
Job 1	529,345	480,954	48,391	9.10%	337,937	371,938	336,259	35,679	
Job 2	908,954	838,484	70,470	7.80%	763,082	827,215	808,038	19,177	
Job 3	313,850	274,175	39,675	12.60%	257,110	294,316	298,900		4,584
Job 4	632,265	582,888	49,377	7.80%	461,610	500,713	525,823		25,110
Job 5	72,608	58,324	14,284	19.70%	18,552	23,096	32,103		9,007
Job 6	1,610,000	1,485,000	125,000	7.80%	664,900	720,868	674,872	45,996	
Totals	4,067,022	3,719,825	347,197	8.50%	2,503,191	2,738,146	2,675,995	100,852	38,701

Calculation of Net Cash Flow (Use):

	Contract Amount	Billed To Date	Accounts Receivable	Cash Collected	Costs To Date	Accounts Payable	Cash Paid Out	Net Cash Flow (Use)	Profit Earned To Date	Cash Flow (Lagging) Earnings	Net Under (Over) Billings	Cash Flow (Lagging) Billings
Job 1	529,345	336,259	76,686	259,573	337,937	34,244	303,693	(44,120)	34,001	(78,121)	35,679	(42,442)
Job 2	908,954	808,038	88,734	719,304	763,082	69,777	693,305	25,999	64,133	(38,134)	19,177	(18,957)
Job 3	313,850	298,900	45,602	253,298	257,110	18,644	238,466	14,832	37,206	(22,374)	(4,584)	(26,958)
Job 4	632,265	525,823	210,715	315,108	461,610	118,222	343,388	(28,280)	39,103	(67,383)	(25,110)	(92,493)
Job 5	72,608	32,103	8,619	23,484	18,552	8,555	9,997	13,487	4,544	8,943	(9,007)	(64)
Job 6	1,610,000	674,872	156,254	518,618	664,900	116,291	548,609	(29,991)	55,968	(85,959)	45,996	(39,963)
	4,067,022	2,675,995	586,610	2,089,385	2,503,191	365,733	2,137,458	(48,073)	234,955	(283,028)	62,151	(220,877)

Point out the following:

- All of these jobs are profitable with an overall gross profit margin of 8.5 percent.
- Based on the percentage of completion (POC) schedule, on the accrual basis these jobs are cash flowing because the amount billed to date ($2,675,995) exceeds costs to date ($2,503,191).
- Overall, the contractor has paid out more cash than collected—net cash flow ($48,073).
- The difference between POC profit earned to date and the contractor cash gain on overall jobs is extremely high—cash flow earnings ($283,028).

Evaluate the Owner of the Contract

The evaluation of the owner of the contract may not be a necessary consideration if the contractor performs a great deal of construction for a government entity. However, if the owner is a private individual, corporation, or other entity, thorough due diligence should be considered mandatory and include the following:

- Credit reports
- Bank references
- Professional references outside of banking
- Litigation review

Billing

The best way for a contractor to manage cash is to always have it available to pay the bills that produced the revenue that provide future cash. So, where does a contractor start? Start with billing at the contract phase.

Contractors must search out favorable terms that allow them to accelerate the cash flows from jobs. These terms are going to be different from one contractor type to another. To the extent possible, the contractors' billing terms should provide for a billing schedule that correlates with the time schedule as established in the job specifications. Terms should be considered regarding the following:

- Materials – Billing for on-site or off-site storage versus installed materials?
- Retentions – Withholding less than 10 percent? Can the retainage be decreased from 10 percent to 5 percent after 75 percent of project is completed?

Practice Pointer

A course participant brought up an interesting billing strategy as it relates to materials as a positive practice for cash flow management. The participant suggested that a contractor exclude any materials from the retainage provisions during the contract negotiations. When you study the material usage by certain subcontractors during a contract, the allowance of excluding retainage being withheld by the prime as it relates to a billing for materials can be a substantial figure greatly improving the contractor cash flow. In particular, if the contractor has added a fair markup price on the material portion of the contract.

One of the most common billing techniques a contractor uses is "front loading" or "front-end loading". Front loading basically means that the contractor is going to assign higher markups to the earlier stages of the job and take lower profit margins or even negative profit margins at the end of the project. This allows the contractor to earn the entire gross profit on the project in the early stages of the contract.

Therefore, the contractor finances the project with the owner's money—a term commonly referred to as "job borrow."

The use of front-end loading is very common in the industry and should be responsibly used by the contractor. Most owners and architects are aware of the front-end loading technique and may scrutinize the bid if the front-end loading is not beneficial to them from a cash flow perspective.

A contractor that uses front loading should use caution with the cash received at the beginning of a particular job. Simply stated, the contractor must be careful not to take funds from one job and use them to cover the losses in cash flow on another job. Also, the contractor should be aware of the concept of "phantom profits"—the idea that the contractor has cash inflow on a project, but has considered the costs associated with earning that cash. Such an influx of cash may lead the contractor to splurge on equipment or pay unnecessary expenditures without realizing the future cash outflow needs. This unnecessary spending highlights the value of budgeting expenditures, as discussed earlier in this chapter.

Submission of billings is very important as well. The contractor should be aware of the billing requirements laid out in the terms of the contract. It is important that all those responsible for the job be aware of the billing terms of the contract. By being made aware as to the proper billing terms, the billing process may be enhanced to produce positive cash flows earlier than expected. Some items to be aware of are

- Billings that can be rendered at levels of completion for certain segments should be billed as soon as such segment is satisfied;
- Billings for cost-plus jobs may allow you to estimate costs during a period and allow for cost adjustments toward the end of a project; and
- Billings that require the attestation of an owner's party. It is important that the auditor establish an appropriate liaison between the contractor and the owner's party.
- If billings are to be submitted in a certain manner, precious savings are lost when billings are rejected by the owner's accounts payable department.

Dictate Change Orders and Punch Lists

Every contractor should choose whether to run his or her jobs or let the superintendent of a general contractor or subcontractor run them. Contractors should not give work away. Job supervisors need to be keenly aware of the plans and specs, and strictly adhere to such plans. Any deviation should not be performed until such additional work has been approved. If the work must be done, approval of such additional work, either verbal or written, should be well documented prior to being done. Unapproved change orders lead to claims, which either result in loss of money or the entity incurring more lost funds in pursuing the claim. In doing so, the key to being awarded a claim will depend upon proper documentation. When a change order situation arises, the contractor should process the change order quickly and in a timely manner. Properly document, obtain approval, and properly report to billing.

Punch lists must be handled correctly and expeditiously. Many times, the punch lists are handled by improper personnel or in an inefficient manner. The result of a punch list being delayed is the delay of receiving held retainage. The impact of delayed retainage is that the majority, if not *all,* of the profit in the job is not received as expected.

Collections

Once the billing practices are implemented, the contractor must ensure that collection is pursued. Billings are futile if collection fails. The contractor should assign an individual within the entity to review the accounts receivable aging periodically. When such a review is performed, channels of communication to the customer, project manager, and the contractor's management team must be open.

In the event that collection efforts are unsuccessful, then decisions must be made as to achieving resolution. Communication should be made to the project manager regarding the approval of payment to subcontractors and suppliers. The project manager may decide to withdraw from the job until payment is collected. More importantly, the contractor should establish procedures to ensure that liens are filed in a timely manner where appropriate.

In some situations, subcontractors may adjust their pricing if they are allowed to be paid on a timelier or more frequent basis. For example, a subcontractor may reduce the price 4–8 percent in order to be paid on a weekly or bi-weekly basis. A prime contractor who has strong cash management practices can increase his or her profit margins greatly by accelerating subcontractor collections. Such collection practices are more beneficial to the prime contractor than to the subcontractor.

Practice Pointer

It is important to note here that the collection of an account receivable is a right and not a privilege. Collection personnel should understand that receivables are due and critical to the success of the company. Provide collection personnel with legally approved notices for lack of payment. Educate and train collection personnel to seek out the responsible individual among the debtors and to firmly inquire when payment will be made.

Monitoring of Underbillings and Overbillings

The review of underbillings and overbillings by owners and management is very critical. The review may raise flags on jobs that should be handled immediately before any project gets out of hand. Contractors should have net overbillings represented on their financial statements. Good contractors will show net overbillings at approximately 5 percent of the annual volume. The sign of overbillings is good only if that money is in the bank or in receivables waiting to be collected.

Jobs that show material underbillings should be sought for explanation. A contractor with significant underbillings is doing a poor job of cash management because the contractor is basically financing the project. The significant underbillings are a strong indicator that unapproved change orders exist and are not being handled properly. The sign of underbillings may also be interpreted as a project that is starting to fade and that estimated gross profits would not be met.

Retainage and Retainage Management

The contractor's ability to bill for retainage is extremely important. If retainage is withheld at 10 percent, there may be a good chance that the entire profit for that particular job may be held in the retainage by the owner. A contractor may not address the wrap-up of one job because they are so consumed in the start-up of another job, thereby allowing the punch list not to be addressed. Such lack of attention allows the retainage of the job to diminish or the timeliness of collection to extend, costing the contractor in the long run.

Another excellent retainage strategy is to pledge certificates of deposit in lieu of having retainage withheld from the contractor. Although this may not be allowed with certain government work, it may provide a useful tool when dealing with nongovernmental entities. The contractor who is subject to having retainage withheld would co-sign the certificate of deposit with the owner or prime contractor, thereby collecting 100 percent of his or her billing. In turn, the contractor receives interest on the pledged certificate of deposit and receives his or her full profit in every billing.

Customer Relations

A contractor's relationship with his or her customer is important and should not be overlooked. Not only is the relationship with the auditor's customer a marketing source for future work but also a strategy to improve a contractor's cash flow. The contractor may want to hand-deliver pay applications to the owner or general contractor. If the owner is a general contractor, the subcontractor delivering the initial pay application may want to review the general contractor's billing procedures to eliminate any errors made in preparation of the pay application. A simple 15-minute conversation over the first pay application can alleviate days and possibly weeks of confusion regarding payment.

Banking

Contractors typically have significant amounts of cash on deposit at financial institutions. The significant deposits are due to the timing of receipts and disbursements, causing a great deal of float within the contractor's operating account. Contractors should have their operating account attached to some form of interest-bearing account or attached to their lines of credit. This may require a "sweep" account from a financial institution. Depending on the amount of average daily float, a contractor can save thousands of dollars in interest.

Other Considerations

1. Pay accounts payable on scheduled dates. This is a more efficient process and allows contractors to know and understand cash requirements.
2. Do not miss purchase discounts from suppliers. The 2 percent discount approximates a 36 percent annual interest rate.
3. Assure retainage provisions required by owners are passed down to subcontractors.
4. Review lease versus buy discretion with cash flow implications in mind.
5. Negotiate in contract provisions that the incurrence of attorney fees due to collection problems will be paid by debtor.

KNOWLEDGE CHECK

3. At what phase of a construction project should the cash management process for a contractor be covered?

    a. Only during the contract.
    b. At the bidding phase.
    c. All phases.
    d. After the job is complete.

4. Cash management as it relates to billings begins with

    a. The bid.
    b. The contract.
    c. Collections.
    d. Groundbreaking on a project.

5. Which one of the following is not considered a practice in improving cash management?

    a. Revenue recognition.
    b. Monitoring underbillings and overbillings.
    c. The owner's presence on the job.
    d. Spreading cash on hand over job sites.

Summary

Good cash management is not about having a great deal of cash on hand at the end of the year. Instead, it is a process to make even the most profitable contractor more successful. Cash management begins with proper budgeting of a company's overhead. It then expands to project acceptance and contract terms. Once a job is awarded, cash management involves communication between project managers, accounting, and senior management to streamline billings and collections and monitor any problems that may evolve.

Chapter 6

ACCOUNTING FOR JOINT VENTURES

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall the benefits and drawbacks to a construction contractor of using a joint venture arrangement.
- Identify the common forms of joint ventures among construction contractors and the common methods of accounting for those ventures.

INTRODUCTION

The construction industry continues to evolve at a steady pace that demands contractors keep up. Many new and complex issues affect contractors on a day-to-day basis. Some of the challenges contractors are facing in order to continue their growth or even survive in the construction industry include

- increased levels of expertise required on projects being developed;
- the demand for more capital due to the escalating prices of contracts from material and labor costs;
- a shrinking labor pool due to a shortage of workers and lack of interest to work in the construction field;
- a tightening surety bond market and increased caution with the assignment of bonds to contractors;
- higher quality standards as owners such as the Corps of Engineers place contractors on a ranking system in order to bid and perform work under Defense Department spending contracts; and
- increased regulations requiring minority participation and setting aside certain contracts for minority contractors as seen in the Section 8A program.

These types of issues which challenge many contractors both large and small have introduced to the construction industry an unusual solution—the joint venture.

This chapter will introduce why joint ventures are considered by contractors; look at how a joint venture works and examine the various methods that the owners of a joint venture use to account for them on their companies' financial statements; and review the impact on a joint venture of FASB ASC 810, *Consolidation*.

KNOWLEDGE CHECK

1. What are some of the demands contractors are facing to continue their growth and survival in the construction industry?

    a. The demand for more capital.
    b. The decrease in prices creating a larger demand for projects to be built.
    c. The increase in an available workforce.
    d. The decrease in prices creating a larger demand for an increased number of projects to be built.

The Joint Venture

A joint venture is entered into by two or more entities who combine their assets, bonding capacities, expertise, or other skills needed in order to perform the construction services required. Contractors enter into joint venture contracts as "members" to share both tangible and intangible assets. Each of the members of a joint venture shares in the risks and rewards of taking on the particular contract or contracts that more than likely they could not perform or would not want to perform on their own.

Most construction industry joint ventures have a short life span, generally to perform all or some part of a particular contract. A joint venture is formed for a single purpose and only lasts until that one purpose (the individual contract) is complete.

Some joint ventures may become somewhat more permanent in nature. The members of these types of joint ventures may have realized benefits of being together from past success with a particular client or in a specialized field. The previous success they have shared justifies keeping the joint venture alive but does not justify having the two members merge into a single entity. With this organizational structure, independent contractors are able to continue to enjoy the benefits of having individual companies because consolidating the entities through a buy-out or a merger is not considered necessary for either company's future success. This type of arrangement allows the individual contractors to continue to work collaboratively for specific clients or in a specialized field when necessary.

A joint venture can vary from formal or informal business entities to shared contracts. Shared contracts are normally referred to as "line item" joint ventures where there is not a formal organization but rather the companies coming together to bid on a contract, but they contract separately with the owner for the specific work they will perform.

A formal joint venture is when an actual entity such as a corporation, partnership, LLC, and so on is created and which actually is the contracting entity with the owner. Some characteristics of a JV are as follows:

1) A joint venture usually provides an arrangement under which each joint venture may participant directly or indirectly, in the overall management of the project.
2) Joint ventures have an interest that is other than passive.
3) The ownership of a joint venture seldom changes and its equity interests are usually not publicly traded.

ADVANTAGES AND DISADVANTAGES

Joint ventures, like any business decision, have advantages and disadvantages.

Advantages

- Allowing contractors to raise additional capital – A joint venture member may not necessarily be a contractor. The member may be a developer or private equity investor anticipating a high return on his or her investment.
- Permitting specific project financing – This is generally seen in a developer – contractor relationship whereby a lender has more than one party vested in a particular project.

- Spreading of risk – With multiple parties involved on a project the risks associated with that project may be spread amongst the different parties involved. Also, depending on the member's areas of expertise, certain risks may be significantly reduced if those risks are within the member's areas of expertise.
- Management flexibility – By forming a separate entity, a large member may be able to be more flexible than had he or she taken on the project alone. Instead of having to meet "corporate guidelines," decisions may be handled differently or more quickly than having to go through corporate bureaucracy.
- Ability to grow and diversify – Forming a joint venture may allow a contractor to stretch the boundaries that limited him or her as a stand-alone entity, including perhaps growing into a national or international operation.

Disadvantages

- Loss of control – Probably the biggest deterrent of a joint venture relationship is the loss of control by the member. The fact that the contractor does not have a "total say so" can be very difficult for the contractor.
- Lack of compatibility with other members – The lack of compatibility spawns from the first disadvantage, lack of control. The contractor's ego may get in the way of clear business decisions.

As outlined in the preceding list, there would appear to be many more advantages than disadvantages in forming a joint venture. So why then don't more contractors form joint ventures? It is more than likely due to the weight that the disadvantages of loss of control and incompatibility carry.

KNOWLEDGE CHECK

2. Which of these is a significant disadvantage to the formation of joint ventures among contractors?

    a. Management flexibility.
    b. Loss of control.
    c. Takes on more risk.
    d. Workforce availability.

Accounting for a Joint Venture

Accounting for a joint venture is comprised of two specific parts—the joint venture as a stand-alone entity and the members of a joint venture.

Accounting for a Joint Venture as a Stand-Alone Entity

For accounting purposes, a joint venture is generally an independent entity that keeps separate records and issues separate financial statements. When discussing the accounting for the stand-alone entity, we are not concerned with how the entity was organized. The choice of entity organization will be discussed later in this chapter. A joint venture is formed, bids on a project, accounts for the project as a separate entity and is typically liquidated once the project is complete. The joint venture agreement will dictate the responsibilities of each member and direct the accounting for the joint venture.

There are circumstances where a joint venture is formed and its members perform only their specific tasks. This situation is sometimes referred to as a "line item" joint venture. In these circumstances, separate accounting records may not be maintained. The members come together and submit their bid as a joint venture. If the bid is awarded, the members perform their specific tasks as agreed upon in the joint venture agreement validated by the joint bid. Each member is responsible for their own costs on the contract and progress payments are made directly to the member who performs the work.

Accounting for a Joint Venture as a Member

When reporting the results of operations of a joint venture on the members' financial records, the accountant should be heavily involved beginning with the stage of consideration of forming a joint venture with another member. We will now turn our attention to the following areas in accounting for a joint venture as a member:

- Method of organization
- Members' ownership percentage
- Method of accounting for the member

Finally, after discussing the preceding topics, we will examine the impact on a joint venture of FASB ASC 810.

The Joint Venture Agreement

Agreements made between the members participating in a joint venture should be the controlling document as to the activities and accounting for the joint venture. In turn, such an agreement may also dictate the accounting for each of the members participating in the joint venture.

A joint venture agreement commonly addresses, but is not limited to, the following issues:

- Capital contributions and management issues
- Loans to the joint ventures and responsibilities on debt borrowings
- Terms for the equipment or material sold, contributed, or rented to the joint venture: In addition to equipment, it should also note what should take place upon the disposal of such assets by the joint venture.
- Legal entity formed
- Member who will be responsible for the administration of the joint venture: A detailed plan may be expressly written as it relates to cash management, billing, financial reporting, and overhead allocations. This may or may not relate to distribution to members.
- Division of losses and profits
- Legal issues and rights

Method of Organization

As previously discussed, the majority of joint ventures are formed only for a single purpose; however, there may be a great deal of diversity in the organizational form of a joint venture entity.

There are several different forms a joint venture may take, including a

- general partnership;
- limited partnership;
- C corporation; or
- S corporation.

All of the forms listed are common forms of joint ventures. Each has its own rationale for its use. Although all generate similar types of accounting issues, each has its own form for reporting financial information. In addition, the tax implications of the type of organization will often influence the structure of the newly formed entity.

PARTNERSHIPS

A very common form of organization for a newly formed joint venture is a partnership. The reason for a partnership is simple. The association of two or more members is designed to carry on, as co-owners, a business for profit. The partnership is dictated by the partnership agreement. A critical factor in the formation of the partnership is the flexibility in allocating profits and losses. This flexibility will become a major factor when we consider the impact of the variable interest entity guidance in FASB ASC 810 later in this chapter.

General Partnership

A general partnership is another common form of a joint venture, particularly when the joint venture consists of multiple contractors. Capital may or may not be limited and contributions may be of equal or uneven amounts. The main characteristic of a general partnership is that all of the general partners share in the management of the partnership. However, as previously mentioned, this sharing of the management function may be a distinct disadvantage of a joint venture. The most effective way to remedy future problems with the sharing of management is to document dispute resolution and business decisions in the partnership agreement.

Limited Partnership

A limited partnership includes one or more general partners who manage the business and are personally liable for the partnership debts and one or more limited partners who contribute capital and share in the profits and losses of the partnership but take no part in the management of the business nor do they incur personal liability with respect to partnership obligations beyond their agreed-upon capital contributions. The limited partnership form of a joint venture is common in the construction industry when the joint venture has members that are not contractors. Limited partners may include legal, financial or other professionals necessary to obtain a project contract by combining forces. Absent construction industry experience, the limited partners will need to be made aware of the various risks associated with a construction contact even after the contract is completed such as warranty related issues.

Public Private Partnerships (P3)

Public-private partnerships, contractual arrangement between a public agency (federal, state, or local) and a private sector entity, are becoming more and more common. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service or facility. These types of joint ventures are commonly used to construct public use projects, such as hospitals, bridges, airports, and so on.

CORPORATIONS

By electing to form a joint venture as a corporation, the venture's members benefit from the flexibility that the corporate form of business entity allows, including limiting the liability of each member to their share in the corporation. However, the tax ramifications of forming a corporation are extremely important and must be carefully studied prior to a decision being reached.

C Corporations

Joint ventures whose members consist of corporations may choose to form the joint venture as a C corporation. The C corporation structure provides members with both flexibility and the ability to receive dividends. Dividends received are entitled to the dividends-received deduction, essentially eliminating (or drastically reducing) any income tax effects by 85–100 percent.

Also, a joint venture may be formed as a C corporation so that a parent can use an existing company or a newly formed corporation as a partner in a joint venture. The subsidiary company (joint venture member) can receive its proportionate share of losses to offset ordinary income of the parent corporation.

S Corporations

Forming a joint venture as an S corporation takes advantage of the pass-thru status that the S corporation offers. The benefit to members, who may not be corporations, is that the double taxation of corporate profits is avoided and any losses of the S corporation may be offset against the other income of the individual stockholders.

Members Ownership Percentage

Most members' ownership in a joint venture is dictated by the joint venture agreement. The most common issues affected by a joint venture agreement include

- profits and losses;
- identified cost allocations;
- revenue allocations;
- expense sharing;
- cash distributions; and
- liquidating distributions.

The accounting issue for the member is determining the appropriate percentage of ownership that should be used for financial statement purposes.

The joint venture agreement should also clarify the different administrative issues and accounting procedures that will be abided by during the tenure of the joint venture. Consideration should be given to and decisions made regarding the following:

- Establishment of bank accounts for the entity
- Determination if the entity will have its own employees or lease and subcontract employees from joint venture members
- Assignment of responsibility for the accounting and contract administration and the amount of fees that will be charged for these services to the members
- Financial reporting mechanisms and profit distribution schedules to the members
- Procedures established for the investment of excess funds derived from billings

Method of Accounting for the Member

Several alternative accounting methods are available to the joint venture members for reporting the joint venture's operating results on the members' financial statements. There are four typical methods of accounting, recording, and presenting a member's interest in a joint venture:

- Cost method
- Full consolidation method
- Equity method
- Partial or proportionate consolidation method

The best accounting method for any given joint venture is that which most appropriately reflects the transactions of the entity. The extent of control the member exhibits in the joint venture is the most important issue in determining the method of accounting for the joint venture on the members' financial statements.

COST METHOD

Under the cost method, the member's investment in the joint venture is recorded at its cost. Income is recognized as distributions are received from earnings accumulated by the joint venture since the member's acquisition. The cost method is most appropriate when the member's ownership percentage in the joint venture is less than 20 percent or when the equity method is deemed inappropriate to use when an ownership percentage is greater than 20 percent.

FULL CONSOLIDATION METHOD

Under the full consolidation method, the joint venture is fully consolidated with the member's financial statements. Any other members' interests are recorded and shown as minority interests. The full consolidation method is used when more than 50 percent of the joint venture is owned by the consolidating member and there are no reasons why the full consolidation should not be used. However, there are reasons for not consolidating. Under the full consolidation method, the complete amount of each of the assets, liabilities, revenues and expenses of the joint venture is combined with the corresponding amounts of the member. The minority interests are disclosed both on the balance sheet and the income statement.

EQUITY METHOD

The equity method is the most common method of accounting for investments in joint ventures by members. The equity method is considered the traditional "one-line" method as prescribed by FASB ASC 323, *Investments — Equity Method and Joint Ventures*. The equity method is generally used when the ownership percentage of the member in the joint venture is between 20 percent and 50 percent.

Under the equity method, a member is considered to have significant influence over the management of the joint venture. Any evidence contradicting the member's significant influence would result in the use of the cost method.

Accounting for a joint venture under the equity method involves the recording the member's initial investment at cost. The investment is then adjusted based on the earnings or losses generated by the joint venture. Dividends received from the joint venture are recoded as a reduction of the adjusted investment recorded on the balance sheet.

The investment in the joint venture is shown as a separate line item on the members' balance sheet, thus the name "one-line" method. The members' share of the net income or loss of the venture is shown separately on the members' income statement.

PARTIAL OR PROPORTIONATE CONSOLIDATION METHOD

The partial or proportionate consolidation method is not commonly used. However, this method is applicable to unincorporated joint ventures where joint and several liabilities exist. This would typically include partnership joint ventures.

Under this method, the member's proportionate interest in each of the assets, liabilities, revenues and expenses of the joint venture is combined with the corresponding amounts of the member. No distinction is made between the member's balances and the joint venture's balances. No minority interest is disclosed because the proportionate share of each undivided interest is included in the member's financial statements.

Disclosure of the use of the partial or proportionate consolidation method is key to the user of the financial statement who may not be aware that such a relationship between the member and the joint venture exists.

Disclosures by Members of Joint Ventures

In addition to the presentation of the basic financial statements, generally accepted accounting principles requires disclosures about joint venture operations in the member's financial statements should, at a minimum, include the following:

- The nature of the guarantee, including the approximate term of the guarantee, how the guarantee arose, and the events or circumstances that would require the guarantor to perform under the guarantee.
- The maximum potential amount of future payments (undiscounted) the guarantor could be required to make under the guarantee. That maximum potential amount of future payments must not be reduced by the effect of any amounts that may possibly be recovered under recourse or collateralization provisions in the guarantee (which are addressed under item 4, below). If the terms of the guarantee provide for no limitation to the maximum potential future payments under the guarantee, that fact must be disclosed. If the guarantor is unable to develop an estimate of the maximum potential amount of future payments under its guarantee, the guarantor must disclose the reasons why it cannot estimate the maximum potential amount.
- The current carrying amount of the liability, if any, for the guarantor's obligations under the guarantee regardless of whether the guarantee is freestanding or embedded in another contract.
- The nature of (*a*) any recourse provisions that would enable the guarantor to recover from third parties any of the amounts paid under the guarantee and (*b*) any assets held either as collateral or by third parties that, upon the occurrence of any triggering event or condition under the guarantee, the guarantor can obtain and liquidate to recover all or a portion of the amounts paid under the guarantee. The guarantor must state, if it is estimable, the approximate extent to which the proceeds from liquidation of those assets would be expected to cover the maximum potential amount of future payments under the guarantee.

Impact of Joint Ventures Due to FASB ASC 460, *Guarantees*

FASB ASC 460, *Guarantees*, deals with recognition of a liability for obligations undertaken by the guarantor, in order for the guarantor to stand ready to perform in the event that such guarantee is triggered. The initial measurement of a FASB ASC 460 liability is the fair value of the guarantee at its inception. There are a number of transactions that cause the implementation of FASB ASC 460; however, the formation of a joint venture does not necessarily bring about FASB ASC 460 recognition.

Even though the contractual performance guarantees that a contractor makes in a joint venture do not typically require FASB ASC 460 recognition, there are other guarantees within the joint venture that may require FASB ASC 460 recognition, including the following:

- A financial letter of credit of a specified financial obligation guaranteed by the members of the joint venture
- Indirect guarantees of the indebtedness of others, such as payments to subcontractors, failed to be made by the joint venture for payment of services
- Performance guarantees (either paid in cash or the provision of services) to a guaranteed party based on another entity's failure to perform under an obligating agreement

Impact of FASB ASC 810, *Consolidation*

The variable interest entity guidance of FASB ASC 810 requires accountants to take another look at the practice of combining and consolidating entities specifically in determining when one entity controls another entity in circumstances where control is difficult to discern. The variable interest entity guidance of FASB ASC 810 came about as a response to the off balance sheet entities that were created to hide assets, liabilities, and other structured transactions leading to the largest bankruptcies ever seen in our country. Therefore, FASB ASC 810 brought the risk factor into consolidating joint ventures.

The four typical methods of accounting, recording and presenting a member's interest in a joint venture previously discussed included the

- cost method;
- full consolidation method;
- equity method; and
- partial or proportionate consolidation method.

The following discusses how these four approaches may be used as an alternative to the variable interest entity guidance of FASB ASC 810 as it relates to accounting for joint ventures.

The Typical Contractor Situation

Contractors are required to follow the principles of FASB ASC 810 for all of their variable interest entities (VIEs), if they have them. It is common to see contractors form separate entities in which they own equipment or real estate. These entities typically rent real estate or equipment back solely to the contractor thereby creating a FASB ASC 810 situation. However, what about a joint venture?

The AICPA Audit and Accounting Guide *Construction Contractors* provides specific guidance on affiliates. The guide states

> **4.05** For the purpose of presenting financial condition, results of operations, and cash flows of a group of commonly controlled entities that generally conduct their construction operations as, in effect, a single economic entity, FASB ASC 810-10-55-1B establishes that combined financial statements (as distinguished from consolidated financial statements) are likely to be more meaningful. The FASB ASC glossary defines *combined financial statements* as financial statements of a combined group of commonly controlled entities or commonly managed entities presented as those of a single economic unit. The combined group does not include the parent. Examples of circumstances in which combined financial statements may be useful, as provided in FASB ASC 810-10-55-1B, include the existence of several entities that are related in their operations or the existence of entities that are under common management.

With an understanding of the alternative methods available and the literary guidance provided by the AICPA, one can begin to consider the approach of applying FASB ASC 810 to the members' financial statements. Based on the different accounting alternatives including FASB ASC 810, our application of joint venture accounting should encompass the old methods along with the consideration of FASB ASC 810.

MEMBER OWNS 50 PERCENT OR MORE AND ASSUMES MAJORITY RISK

In this situation the consideration of FASB ASC 810 is really a nonissue. Our accounting guidance, regardless of risk, indicates we should use the full consolidation method of accounting. The full consolidation method mirrors the accounting impact of FASB ASC 810. This method is most commonly seen when minority contractors team up with larger contractors on partnering programs or Section 8A contracts.

THE JOINT VENTURE STRUCTURE

As discussed earlier, the most common structure of a joint venture is a partnership. A joint venture formed as a partnership or undivided interest is like a contract shared by one or more parties. Because of the sharing feature, the risks of the joint venture are also shared. Therefore, the partnership should be accounted for under the proportional consolidation method by the members of the joint venture, whether the members' interest is of a majority or minority form.

To clarify the questions that arise in determining whether or not a construction joint venture is a VIE or not, the following situations to answer the issue:

- A construction or development joint venture is not usually a VIE.
- Construction joint ventures are usually structured as a partnership or as unincorporated undivided interests.
- A joint venture that is structured as a partnership or as undivided interest is typically accounted for under the proportional consolidation method.
- Small ownership interests in a joint venture can result in a VIE if the joint venture is a corporation.
- If the services that the member provides to the joint venture are relatively proportional to the member's ownership percentage of the joint venture, the member can recognize its profit to date on its contract with the joint venture if the member as a greater than 50 percent ownership in the joint venture, the contract of the joint venture is negotiated or bid, and the member can perform the contract. The member can account for the joint venture contract in the income statement as it would a non-joint venture contract. The balance sheet considerations would be based on the formation of the joint venture.
- If the services that the member provides to the joint venture are relatively proportional to the member's ownership percentage of the joint venture, the member can recognize its profit to date on its contract with the joint venture if it has a minority interest and the member can perform the contract. If so, the accounting procedures for both the income statement and balance sheet are as noted.
- If such services by the member were covered by the joint venture agreement or a subsequent subcontract that is disproportionate with the member's ownership percentage, the member would account for such as any other construction contract and treat his or her balance sheet depending on the formation of the joint venture.

OPTIONS INVOLVING THE ATTEST FUNCTION

With FASB ASC 810 and its effect on the users of the financial statements, especially as it relates to joint ventures, the following issues should be considered by the parties involved relating to their financial statements:

- After researching the issues related to FASB ASC 810, the impact of implementing it may be deemed immaterial to the overall financial statements and no further work considered necessary. In this case, an unqualified opinion may be issued.
- If the VIEs are material to the overall financial statements, the member can implement FASB ASC 810, consolidate the financial statements, and render an unqualified opinion.
- If VIEs are material to the overall financial statements and management does not want to comply with FASB ASC 810, the accountant may issue an "except for" opinion and disclose the reason for the opinion without being misleading on the financial statements. In this case, the departure must be measured and disclosed.
- If the VIEs are material to the overall financial statements and management does not want to comply with FASB ASC 810 and no measurement is disclosed under an "except for" opinion, the financial statements should be considered misleading and an adverse opinion should be rendered.

KNOWLEDGE CHECK

3. Which of the following accounting methods for a joint venture is most common?

    a. Cast method.
    b. Full consolidation method.
    c. Equity method.
    d. Proportionate consolidation.

Summary

Joint ventures are becoming increasingly popular in the construction industry. In deciding whether or not to become involved in a joint venture, the contractor should consult an accountant or other professional adviser in order to understand the ramifications that may be involved. The accountant or adviser should be aware of the purpose and the different advantages and disadvantages a joint venture relationship may bring about.

Chapter 7

BENCHMARKING THE CONTRACTOR

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall common ratios and their meanings used by the users of construction contractor financial statements.
- Identify elements of non-financial measures and how they may be applied to benefit the performance of a contractor.

INTRODUCTION

The evaluation of one's performance is a necessity for any good company. Such evaluation of any company provides insight into three areas:

- The company's past
- The company's present
- The company's ability to progress in the future

The review of these measurements and comparisons of those measurements, whether to an internal or an external source, is what we consider benchmarking.

Benchmarking is good for any company. In the construction industry, it opens the eyes of a contractor to what he and his competitors in his specific field are doing. Particularly for the construction industry, there is a wealth of resources available for such comparison not only from a financial perspective but also a non-financial perspective.

To the contractor the idea and use of benchmarking within the company to the company's past, present, and future is a much-needed service that the adviser in the construction industry can provide.

KNOWLEDGE CHECK

1. What is considered the review of measurements and comparison of those measurements to an internal or external source?

    a. Confirmation procedures.
    b. Benchmarking.
    c. Preliminary analytics.
    d. Interim review.

Financial Benchmarking

Financial benchmarking is nothing new to the construction industry. The surety's use of financial benchmarks is a very common practice. The surety gathers the financial information from the contractor via the financial statements produced from the contractor's accountant.

From the financial information obtained, the surety uses common ratios prevalent to the construction industry. Such ratios and other valuable financial information are maintained in some form of historical database for the particular contractor. The surety uses the financial information and benchmarks the contractor to the contractor's past. The surety may also benchmark the contractor to internal databases maintained by the sureties to compare the contractor client to the particular contractor's trade, region, volume, and other characteristics pertaining to the contractor. The collection of such information provides the surety with insight as to where the contractor has been (the past), where the contractor currently is positioned (the present), and where the contractor has the ability to go (the future).

The following are common ratios, formulas, and interpretations.

LIQUIDITY RATIOS

Ratio	Formula	Interpretation
Current Ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	Indicates the extent to which current assets are available to satisfy current liabilities. Usually stated in terms of absolute values (that is, 2.1 to 1.0 or simply 2.1). Generally, a minimum current ratio is 1.0, which indicates that current assets at least equal current liabilities.
Quick Ratio	$\frac{\text{Cash and Cash Equivalents} + \text{Short - Term Investments} + \text{Receivables, net}}{\text{Current Liabilities}}$	Indicates the extent to which the more liquid assets are available to satisfy current liabilities. Usually stated in terms of absolute values, a quick ratio of 1.0 is generally considered a liquid position.
Days of Cash	$\frac{(\text{Cash and Cash Equivalents}) \times 360}{\text{Revenue}}$	Indicates the number of days revenue in cash. Generally, a ratio of seven days or more is considered adequate.
Working Capital Turnover	$\frac{\text{Revenue}}{\text{Working Capital (Current Assets - Current Liabilities)}}$	Indicates the amount of revenue being supported by each $1 of net working capital employed. A ratio exceeding 30 may indicate a need for increased working capital to support future revenue growth.

Liquidity ratios are balance sheet driven. Liquidity ratios look at the current assets the contractor has on hand to satisfy the company's current obligations. In contractor terms, liquidity ratios evaluate the contractor's working capital. Working capital is one of the most significant calculations made by bankers and sureties.

Sureties rely on working capital calculations to determine the amount of work a contractor can handle currently and in the future. A contractor's individual project bonding capacity is typically stated in terms of 10x or 12x working capital. Bankers and other financial institutions use liquidity ratios to determine the contractor's ability to finance the upcoming contract and still meet the company's current obligations.

PROFITABILITY RATIOS

Ratio	Formula	Interpretation
Return on Assets	$\frac{\text{Net Earnings}}{\text{Total Assets}}$	Indicates the profit generated by the total assets employed. A higher ratio reflects a more effective employment of company assets. This ratio is generally stated in terms of percentages (that is, 10 percent return on assets).
Return on Equity	$\frac{\text{Net Earnings}}{\text{Total Net Worth}}$	Indicates the profit generated by the net assets employed. This ratio reflects the stockholders' return on investment and is generally stated as a percentage. A very high ratio may indicate an undercapitalized situation or conversely, a very profitable company!
Times Interest Earned	$\frac{\text{Net Earnings} + \text{Income Taxes} + \text{Interest Expense}}{\text{Interest Expense}}$	Indicates the company's ability to meet interest expense from operations. A low ratio may indicate an over-leveraged situation and a need for more permanent equity.

Profitability ratios evaluate the effectiveness of how the company uses both its assets and equity. Contractors spend significant amounts of resources on equipment to perform on their jobs. These profitability ratios help evaluate the successful employment of these assets.

Profitability ratios also look at the effective use of the company's equity. The owners of the company can evaluate the rate of return on their investment based on the risk they are willing to accept.

Leverage Ratios

Ratio	Formula	Interpretation
Debt to Equity	$\frac{\text{Total Liabilities}}{\text{Total Net Worth}}$	Indicates the relationship between creditors and owners. Generally, a ratio of three or lower is considered acceptable.
Revenue to Equity	$\frac{\text{Revenue}}{\text{Total Net Worth}}$	Indicates the level of revenue being supported by each $1 of equity. Generally, a ratio of 15 or less is considered acceptable.
Asset Turnover	$\frac{\text{Revenue}}{\text{Total Assets}}$	Indicates the level of revenue being supported by each $1 of assets. By reviewing the trend of this ratio one can determine the effectiveness of asset expansion.
Fixed Asset Ratio	$\frac{\text{NetFixed Assets}}{\text{Total Net Worth}}$	Indicates the level of stockholders' equity invested in net fixed assets. A higher ratio may indicate a lack of funds for current operations. Usually, a low ratio indicates a more favorable liquidity position; however, off balance sheet financing of equipment may offset this apparent positive indication.
Equity to General and Administrative Expenses	$\frac{\text{Total Net Worth}}{\text{General and Administrative Expenses}}$	Indicates the level of overhead in relation to net worth. Generally, a ratio of 1.0 or more is considered acceptable.
Underbillings to Equity	$\frac{\text{Unbilled Work + Cost in Excess}}{\text{Total Net Worth}}$	Indicates the level of unbilled contract volume being financed by the stockholders. Usually stated as a percentage, a ratio of 30 percent or less is considered acceptable.
Backlog to Equity	$\frac{\text{Backlog}}{\text{Total Net Worth}}$	Indicates the relationship of signed or committed work to total stockholders' equity. Generally, a ratio of 20 or less is considered acceptable. A higher ratio may indicate the need for additional permanent equity.

Leverage ratios determine whether the company is operating on its own or having to rely on outside financing or stockholders' equity to continue its day-to-day operations. The reliance and dependency on outside debt is known as "the silent killer" to many construction companies.

EFFICIENCY RATIOS

Ratio	Formula	Interpretation
Backlog to Working Capital	$\frac{\text{Backlog}}{\text{Current Assets - Current Liabilities}}$	Indicates the relationship between signed or committed work and working capital. A higher ratio may indicate a need for an increase in permanent working capital.
Months in Backlog	$\frac{\text{Backlog}}{\text{Revenue}/12}$	Indicates the average number of months it will take to complete all signed or committed work.
Days in Accounts Receivable	$\frac{(\text{Contract Accounts Receivable} + \text{Other Accounts Receivable} - \text{Allowance for Doubtful Accounts}) \times 360}{\text{Revenue}}$	Indicates the number of days to collect accounts receivable. A lower ratio indicates a faster collection of receivables, thus more liquidity. Consideration should be given to the days in accounts payable ratio because higher days in accounts receivable ratio may indicate a drain on cash flow.
Days in Inventory	$\frac{\text{Inventory} \times 360}{\text{Cost of Sales}}$	Indicates the number of days required to sell inventory. A high ratio may indicate an overstocking of inventory.
Days in Accounts Payable	$\frac{(\text{Accounts Payable - Retainage}) \times 360}{\text{Total Cost}}$	Indicates the average number of days it takes to liquidate trade payables. The ratio should be compared to credit terms of vendors. Retainage has been excluded.
Operating Cycle	Days in Cash + Days in Accounts Receivable + Days in Inventory - Days in Accounts Payable	Indicates the length of time it takes for the company to complete a normal operating cycle. A low ratio may indicate a need for more permanent working capital.

Efficiency ratios provide the owners an indication as to certain detailed aspects of the company. They provide insight as to how well the company manages cash or demonstrates a contractor's need to seek out new work. Comparisons such as days in receivables to the days in payables are made by sureties to indicate cash flow problems a contractor may be experiencing. The use of these ratios can help the contractor set specific goals within the company to improve performance.

The usefulness of financial ratios is increased as individual ratios are compared to each other over time. Such comparison allows the contractor to identify trends and will provide indicators of possible misstatements or problems when variances occur. A trend analysis of three to four years would be appropriate. Comparison of only two years does not adequately establish any trend.

The comparison to industry ratios should be evaluated with one's professional judgment. Many times if only a small pool of participants is available, it may not represent the industry as a whole. However, such a comparison can provide valuable insight for the contractor.

Case in Point

Too Proud Construction Company (TPCC) is a general contractor. TPCC had his year-end financial statements reviewed by a CPA and benchmarked to the CFMA Annual Financial Survey. For the year TPCC boasted a proud 29 percent gross profit. When compared to the survey for general contractors in TPCC's region, the average gross profit was approximately 22 percent. When TPCC reviewed this information, he bragged to his CPA and his bond agent that he knew how to make money on jobs if only he could be allowed to bid more work. What TPCC did not realize is that his selling, general, and administrative expenses to revenue were completely skewed from the information published in the survey.

What do you believe was TPCC's problem?

Based on this example, TPCC was not properly job costing all of his expenses. This insight would help the adviser assist TPCC in identifying what costs should be included in selling, general, and administrative expenses and what costs should be allocated directly to jobs. In this particular case, TPCC's workers' comp insurance, equipment depreciation, general, liability insurance, and a few other items were included in his selling, general, and administrative expenses. These were items that should have either been charged directly to jobs or allocated to jobs based on some factoring. Once performed, TPCC saw where his gross profit ratio fell to less than the average. Furthermore, the adviser to TPCC was able to identify a more effective break-even analysis for TPCC that improved his bidding on projects.

KNOWLEDGE CHECK

2. Which one of the following ratios determines whether the company is operating on its own or if the company is having to rely on outside financing or stockholder's equity to continue its day-to-day operations?

    a. Leverage ratios.
    b. Efficiency ratios.
    c. Profitability ratios.
    d. Liquidity ratios.

Healthy Contractor Benchmarks

CPAs should always assess the health of their contractor by performing benchmarks based on the criteria established by the contractor's surety. The following criteria are not specified for a particular contractor type; however, the criteria are good measurement for any contractor.

1. Tangible working capital of at least 7.5 percent of annual revenues: Tangible working capital should not include assets such as prepaid expenses and slow-moving inventory. To determine tangible working capital, it would be best to ask the surety that your contractor client uses. A review of aged receivables should be performed and those questionable receivables and certain underbillings should be discounted or eliminated.

2. Tangible equity should be greater than 10 percent of annual revenues. Tangible equity may be defined as adjusting the same items for tangible working capital and any accrual of liabilities that may be made by the surety (that is, potential distributions for income taxes at individual level).

3. No net underbillings

4. Net overbillings should be in excess of 2 percent of annual revenues. Such overbillings should be included in either cash or contract receivables on the balance sheet. To add to this health ratio, permanent job borrow should be less than 25 percent of backlog gross profit. Also, in determining net overbillings, consider the impact of warranty, punch lists, and clean-up costs.

5. Cash to overbilling ratio should be 1.25 or less. When calculating, consider the amount of overbillings that are included in contract receivables and retainage.

6. When reviewing the profit or fade analysis of the job schedule, contract fade should be less than 1 percent of annual revenues. For specialty trades, you may see the contract fade be a little bit higher, but for the healthy contractor it should not exceed 2 percent of annual revenues.

7. Contract estimates should be equal to or less than historical profit.

8. Ten percent of the largest single contract should be less than 50 percent of equity.

9. Cash in bank should be 5 percent of annual revenues.

10. Selling, general, and administrative expenses should be consistent from year to year, with increases and decreases reflective of annual revenues.

11. Backlog gross profit should be in excess of 50 percent of selling, general, and administrative expenses.

12. Interest bearing debt to equity of 80 percent: For equipment intensive contractor, you may alter this to 50 percent.

13. Total liabilities to equity in a range of 3.0 to 1.0

14. Debt coverage of at least 1.5

15. No claims or unapproved change order included in receivables

16. Days in accounts receivables reported at 45 days or less: To properly account for this ratio, accounts receivables should not reflect retainage.
17. Good owner prequalification controls
18. Low employee turnover, especially in the areas of estimating and project management
19. Low insurance experience ratios
20. Consistent use of benchmarks to oneself and the industry

Non-Financial Benchmarking

As mentioned earlier, the benchmarking of financial ratios has been in practice in the construction industry for quite a while because of the involvement of sureties and their calculations of risk with the contractor. Although the use of non-financial benchmarking is not as common, the use of non-financial data can be a very effective tool for the contractor. In fact, the use of non-financial data could be viewed as more valuable than the financial data. However, the combination of using both non-financial and financial data will be beneficial to the contractor in pursuing his or her growth strategy, non-financial data that we will consider are as follows:

- Time
- Performance of work
- Performance of employees

What non-financial data needs to be benchmarked depends on the type of contractor one may be working with. The availability and the importance of the non-financial information will vary among the different types. One must consider this when determining proper non-financial benchmark criteria.

Time

A very important part of the construction process is time whether you are referring to the time it takes to estimate and bid a job, labor hours on a job, or the time it takes to close out a project. Time is addressed in all facets of the contract, most notably when to proceed and when the project is due (before penalty provisions start to accrue).

Service oriented contractors should take into consideration the time it takes to schedule and service a customer and the time it may take to bill that service work. For a bid job, you may take into consideration the time it takes to identify a change order and the time that follows in obtaining approval and billing for that change order.

Performance of Work

The performance of work can be measured in aspects of the quality of work that is performed by the contractor. Quality of the work performed can be measured by the amount of rework performed, warranty claims, and number of complaints received.

The cost of rework can be very significant for the contractor. Depending on where the rework is to be performed, the contractor may be required to tear down work of others to address the claim that is being made. The costs may include additional labor, materials, and the work of subcontractors, depending on how much had to be torn down. Cost of rework also includes “loss of opportunity” costs: that is, the opportunity to perform new work instead of corrected and unpaid work.

Performance of Employees

The timing and performance of work is driven by the performance of the employees of the company. The mindset of the employees is often set at the top by the management and owners of a company.

In order for the company to achieve the mindset among its employees to drive the timing and quality of the work performed, the company must benchmark and evaluate its employees to the standards set. This may be achieved by performance evaluations, project bonus incentive programs, benchmark bonus pools, and so on.

Case in Point

A painting contractor (RBI) wanted to improve the quality, morale, and timeliness of the projects being done by his company. RBI implemented an employee evaluation tool that was used in determining annual compensation adjustments. RBI also implemented a project bonus incentive program that also tied into a year-end bonus program. The employee evaluation and project bonus incentive program focused on quality of work, general work conditions, timeliness of work completion, and a share of job profitability. In addition, a pay scale was implemented that implicated pay adjustments both positively and negatively for current employees, based on the type painting work performed by the employee.

Results were outstanding. RBI saw the following results:

- Improvement in cash flow, a result of the change in wages, decreased equipment loss (evaluation point), and accuracy and timeliness in cost-plus billings (evaluation point)
- Improvement in morale: Employees were no longer focused on receiving a paycheck. They were focused on improving profit on the project.
- Improvement on job profitability: On a company-wide average, RBI saw an overall increase in gross profit of 2.5 percentage points.

RBI used financial measures in rewarding employees based on job profitability and used non-financial measures in evaluating individual employees. The Company's use of both financial and non-financial measures increased RBI's company as a whole.

Sources for Developing Benchmarks

- Almanac of Business and Industrial Ratios
- Construction Financial Managers Association (CFMA) Annual Survey
- PAS Publications
- Robert Morris Associates (RMA)
- On-line databases
- Trade association literature (ABC, AGC, ASA, NHBA, and so on)
- Many others

KNOWLEDGE CHECK

3. What may be useful in determining the use of time, performance of work, and performance of employees?

    a. Non-financial benchmarks.
    b. Financial benchmarks.
    c. Efficiency ratios.
    d. Liquidity ratios.

Summary

Benchmarking is a valuable tool that any size contractor can use to measure one's performance. The Company can use the information to measure its past performance, evaluate its current position, and develop a growth strategy for the future. The benchmarking does not have to be confined strictly to financial measures. The use of non-financial benchmarks can be even more beneficial to the contractors in setting internal goals for those involved with the company. The adviser to the contractor should provide benchmarking for his or her clients at least annually so that the adviser and the contractor will understand their past, present, and future.

Chapter 8

CONSTRUCTION COST ALLOCATIONS

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall the components of job costs incurred within the construction industry and the common categories into which the costs are divided.
- Identify the specifics of indirect costs and recognize that they are an important component of the direct costs associated with construction accounting.
- Recall the details of the application of cost pools, both with labor and equipment expenditures implemented by contractors.

INTRODUCTION

Many times, when discussing the bidding process with contractors, the infamous phrase "ten and ten" is usually mentioned. "Ten and ten" is the estimated profit and overhead costs the contractor is bidding into a job in anticipation of winning the project: 10 percent for overhead and 10 percent profit. The concern is not regarding the 10 percent of overhead nor the 10 percent estimated for profit. These may be good estimates. That is, these may be good estimates as long as the contractor understands his or her construction costs.

This chapter will discuss the various costs that contractors should consider when determining their job profitability and properly accounting for expenditures made by the company overall. Being able to clearly anticipate profit or loss is vital to the bottom line of every construction company. Due to the tightening of the economy and the strict guidelines being imposed by bonding companies and sureties, it is very important that contractors understand their construction costs in order to minimize significant fluctuations that are reported on their financial statements. Such unusual trends could possibly force the bonding company and surety to dismiss the contractor as a client.

Components of Job Costs

When discussing job costs with contractors, we are referring to the concept of understanding that job cost is more than just invoices and payroll. The charging of specific invoices and certain time sheets to a particular job is by far the easiest and clearest way of tracking job costs. And for most contractors, the charging of specific invoices and certain time sheets is the extent of their job cost accounting reports. These contractors are typically very proud of their gross profit margins. They proclaim that if they only had more work how successful they could be. Their biggest complaint: overhead.

What is missing from the job costs in determining their boasting gross profit margins are the *indirect* costs associated with those specific invoices and certain time sheets we mentioned in the previous paragraph? Without giving any consideration to the indirect job costs, the contractor is getting only part of the picture.

Case in Point

Contractor A is a heavy contractor with a good bit of material and equipment costs. During the year, profit margins on jobs are extremely good, per the job profit and loss reports. At year-end, the controller reviews the company's overhead that is charged to selling, general, and administrative costs. The controller then allocates approximately 50 percent of the selling, general, and administrative costs to the jobs worked on during the year, based on the revenues made from those individual jobs. At the end of the year, all parties (accountant, surety, bond agent, bank, and even the company president) are all in shock at the significantly low gross margins being reported. The shock is a result of the indirect costs not being allocated during the year to jobs, and the impact is felt at the worst possible time: when year-end financials are prepared.

The costs incurred by a contractor can be divided and classified as follows:

- Some costs are reasonably allocable to both individual contracts and individual tasks within contracts.
- Some costs are reasonably allocable to individual contracts but not to individual tasks within contracts (frequently termed general conditions or job overhead).
- Some costs are not reasonably allocated to either individual contracts or individual tasks within contracts (frequently termed selling, general, and administrative expenses or period costs).

Practice Pointer

In this chapter, we will explore how these costs incurred by the contractor are accounted for and identify methods that can be implemented by the contractor to clearly reflect proper job costing. The assistance of the CPA in the implementation process will be greatly needed by the contractor.

When discussing true job costs, five areas are most commonly mentioned. They are

- labor costs;
- material costs;
- subcontract costs;

- equipment costs; and
- job overhead or general conditions.

Once these costs are determined, the typical contractor will return and add a percentage for overhead and a percentage for profit (10 and 10) and submit their bid. We will discuss each of these costs in detail and discuss various indirect costs that should be associated with each of these costs.

When determining what indirect costs should be associated, it is important that the following things be kept in mind:

- All significant costs that can be specifically identified to contracts should be charged as direct costs. If they do not meet any of the first four cost areas mentioned, they should be classified as job overhead or general conditions (explained later in this chapter).
- Overhead allocation methods employed by the contractor should be systematic, rational, and consistently applied. In most situations, the overhead allocation methods should be maintained in the form of a written policy. The written documentation will help to eliminate inconsistencies and minimize discussions on over- or under-allocations by project managers and estimators.
- Burden rates as they relate to labor, subcontract, equipment, and general and administrative costs should be evaluated frequently and revised accordingly.

LABOR COSTS

Labor cost to most contractors is the most easily identified component of job costs. Labor cost is composed of the laborers on the job multiplied by their hourly rate and the number of hours they work. The handling of labor cost sounds fairly simple. But is it?

Direct wages (laborer pay) are usually determined directly from the time sheets provided by superintendents at the job site. For the most effective job cost reporting, the time sheet should indicate, at a minimum, the job name and number, job phase, and the number of hours worked. For internal control purposes, the time sheet should indicate the employee's signature and the approval by the job superintendent.

In addition to hours and pay rate, the payroll taxes associated with the direct labor hours should be calculated as part of the labor cost. This calculation can be performed by any basic software that has job cost accounting capability. Rates for Social Security, Medicare, and federal and state unemployment premiums should be accounted for by the system and appropriately allocated to the job in direct relation to the wages the taxes are attributable to. If the contractor employs unionized employees, the union burden costs associated with direct labor should also be accounted for in much the same way as employment taxes.

The direct wages, related employment taxes, and union burden costs are, in most cases, properly accounted for by contractors. This is largely due to the accounting software maintained by the contractor. Problems with these particular costs may be encountered if such rates are not updated based on new laws or through contract negotiations with unions. Also, problems may exist when contractors venture into new states and do not properly update their software with the rates of foreign states.

Case in Point

Mississippi Mud Bug Contractors, Inc. has been growing strong over the past two years and decided to start working in bordering Louisiana. Mud Bug hired 60 new employees for its Louisiana contracts won in 2003 and entered the 60 new employees into its payroll system using the Mississippi state unemployment rates of 1.3 percent, subject to a base payroll of $7,000. After two quarters of payroll, Mississippi Mud Bug had incurred and remitted $5,460 of unemployment premiums for payroll during those two quarters. However, the Louisiana rates were 5.38 percent on the first $10,000 of wages. In this instance, Mississippi Mud Bug had underpaid its liability for state unemployment insurance premiums by $26,820. In addition to incurring penalties and interest charges, these costs were not properly allocated to the jobs during those first two quarters of work in Louisiana.

The hourly rate and the payroll taxes are not the only costs a contractor incurs as it relates to labor. The contractor may need to consider these costs as they relate to labor costs incurred on jobs:

- Workers' compensation insurance
- Company paid health insurance
- Company paid life insurance
- General liability insurance
- Vacation and sick leave
- Other non-direct costs from labor, including (but not limited to) dental insurance, 401(k) match, and other company-paid benefits.

These costs are often overlooked because they are run through the accounts payable system and not designated or coded as a job expense. Also, many of the company-paid benefits are incurred regardless of any particular job. These costs do not have to be approved by superintendents nor are they considered in the estimating phase. Because of these reasons, these costs become a part of the contractor's general and administrative costs.

Some small contractors may understand that these costs should be charged as job costs. In doing so, the small contractor uses a "shotgun" approach of allocating these costs to jobs. Another approach used to account for these costs is charging these expenditures to a cost-of-sales account but not charging an individual contract for these costs. There is a problem with both of these allocation approaches: a true job profit is never recognized on any job.

Workers' compensation insurance premiums are based on labor rates related to specific types of work. Work types (classification codes) can vary between a wide range of levels and, in turn, a wide range of costs. For example, a common paint contractor may have a workers' compensation rate of 11 percent. However, if that same painter paints a bridge or water tower, the workers' compensation rate will escalate to 38–45 percent. That is a significant increase and must be properly accounted for when determining profitability on jobs. The same can be true if the contractor performs work in different states. The change in state rates can be significant to the overall job depending on the contractor's experience ratio in that state.

The workers' compensation insurance costs, as mentioned, are based on classification codes. In most software programs, the classification codes can be managed in the payroll module of the software program and properly coded to the contract. If done through the payroll system, the time sheet will need to reflect the type of work being performed for workers' compensation clarification.

The accounting for workers' compensation insurance can be confusing because of the different methods used to pay for workers' compensation. When costs such as the workers' compensation insurance are managed through the payroll system and charged to a job cost, the system will debit the appropriate expense account and automatically credit a different account as an offset. The offsetting account is very important for the contractor because it will determine where the payments for workers' compensation insurance should be charged.

The offsetting account can be a contra-expense account, or it may be a liability account. It is best to use the offsetting account strictly for workers' compensation insurance. By having this separate account, the contractor is able to monitor its possible overpayment or underpayment of workers' compensation insurance premiums on a continual basis, instead of being surprised by a workers' compensation audit during the year.

The other costs, such as company-paid health insurance, general liability insurance, vacation or sick leave, and other non-direct costs are not directly related as a percentage of labor costs. Because of this, these construction costs may become more complicated to account for with low or mid-level job cost systems. For costs such as these, the contractor may want to use a *labor cost pool*.

Labor Cost Pool

A labor cost pool accumulates costs of various labor expenditures and allocates such expenditures as a percentage of labor costs to a particular job. General ledger account codes used to account for these labor costs are decided upon by management. An estimate of these costs are made at the beginning of each year and compared as a percentage of anticipated labor dollars. The calculated percentage is then applied much like that of a payroll tax to the direct wages charged to a project. The offset on the contractor's general ledger is a contra-expense account that is included within the labor cost pool. An example follows:

BBC, Inc. is a mason contractor that estimated the following labor costs for 2016:

Labor	$700,000
Co. paid health insurance	$325/mo. per emp.
Co. paid benefits**	$135/mo. per emp.
Workers comp	21% of labor dollar
Payroll taxes	Roughly 9% of labor dollar
Number of emp.	20
** Benefits include vacation, sick, and dental combined as a monthly amount due.	

Based on the previous facts, BBC, Inc. would account for an estimated total costs of $110,400 ($325+ $135= $460/ mo*12mos.*20 employees) in the labor cost pool. BBC, Inc. would then set up a percentage of 15.77 ($110,400/ $700,000) to allocate to jobs for the company-paid health insurance and other company-paid benefits. The workers' compensation rate and payroll taxes would not be included in the labor cost pool. These costs should be set up as their own separate codes within the payroll tracking system as discussed earlier.

Each month the company can evaluate the accuracy of management's labor cost estimate made by reviewing the labor cost pool account code grouping. If the pool shows a profit (the net labor cost pool

would show a credit balance), the allocation to jobs is too great. If the labor cost pool shows a loss (the net labor cost pool would show a debit balance), the allocation to jobs is not enough. Based on this information, management can make an adjustment to the rates, either up or down, to correct an earlier miscalculation.

Many contractors have salaried employees that work on a number of jobs during a single pay cycle. These employees may consist of superintendents, project managers, and even estimators that serve in capacities other than estimating alone. Unfortunately, these employees do not maintain time sheets like public accountants. The accounting for these salaries often leaves the contractor's accounting department perplexed. To settle this problem, the payroll personnel will either charge the salaried employees as a general and administrative expense or allocate the salary arbitrarily across the various jobs being worked on during the covered payroll cycle.

Charging the salaried employee to a general and administrative expense account is the easiest alternative, but not necessarily the best reflective alternative. These salaried people may not be considered a general and administrative expense, as we will discuss this definition later in this chapter. The other alternative, arbitrarily spreading the salary across the various jobs, is more accurate, but the time spent doing so may be overwhelming.

The best approach to allocating the cost of these salaried employees is including these employees in the same labor cost pool, as we discussed with company-paid benefits. Even though these costs are not based on direct labor dollars, the fact that this type of salaried employee serves in a supervisory capacity meets the criteria of an indirect job cost.

Using the preceding example, BBC, Inc., had two superintendents and an estimator in 2016 who received salary, taxes, and benefits of $150,000 combined.

Adding this cost to the labor cost pool, the direct labor percentage would increase to 37.2 percent ($110,400 + $150,000/ $700,000).

MATERIAL AND SUBCONTRACT COSTS

Material costs are the costs of materials, plus freight costs, that become a part of the construction project. At times, a contractor may enter a contract whereby the customer will furnish the materials for all or a portion of the job. For these material costs specific guidance is available through Financial Accounting Standards Board (FASB), *Accounting Standards Codification* (ASC) 605-35. FASB ASC 605-35-25-23 provides the following guidance related to material costs:

> If the contractor is responsible for the nature, type, characteristics, or specifications of material that the customer furnishes or that the contractor purchases as an agent of the customer, or if the contractor is responsible for the ultimate acceptability of performance of the project based on such material, the value of those items should be included as contract price and reflected as revenues and costs in periodic reporting of operations.

Subcontract costs are costs incurred under subcontract agreements with other contractors. Subcontractors submit bids or price quotes to another contractor to perform a certain type of work or a specific task. Subcontract costs typically include retention and also have back-charges assessed which in turn reduce the amount of subcontract costs on a particular job.

The reason we discuss material and subcontract costs together is that they are both considered committed costs. A committed cost is booked to a job upon its inception. A contractor that commits to purchasing certain materials and signs subcontract agreements to use certain subcontractors to perform a particular function on a project understands that these costs are obligations for the contractor and will be incurred some time during the contract.

For many small contractors, these costs are straightforward and have little or no additional costs associated with them. The cost of materials and subcontractors are charged directly to the job when invoices are received and delivery and performance of work is verified from the field.

For larger contractors, materials may be purchased in bulk and stored at a company warehouse. Contractors may use a significant number of subcontractors. Due to the large use of subcontractors, large prime contractors may have a subcontractor's payable clerk on staff to manage the paperwork and communication with the various subcontractors. Regardless of what method the contractor employs, any overhead associated with material maintenance or subcontractor maintenance is typically very immaterial to any particular job. Provisions made to account for any allocations could prove to be more troublesome than helpful or accurate. These administrative services may want to be included in an overhead allocation pool that we will discuss later in this chapter.

EQUIPMENT COSTS

Equipment costs can be substantial for a contractor. Equipment costs are divided into two categories:

1. Outside equipment costs
2. Owned equipment costs

Outside equipment costs consist of equipment rentals not owned by the company. These costs are usually easily identified and typically charged directly to a particular job.

Owned equipment costs are usually handled in a different manner. Most contractors, even some heavy contractors, do not have an accounting procedure in place to properly charge their owned equipment costs to jobs. Instead, owned equipment costs are charged to overhead and are distributed against profits at year-end. The problem is that equipment costs can be a staggering amount. The non-allocation of such significant costs can skew preliminary gross profit margins on jobs when communicating to third parties, such as bond agents, when discussing the company's success on individual jobs.

In addition to the poor accuracy in job cost reporting, the lack of accounting for equipment costs can affect contractors in other ways as well. If the equipment costs are in overhead, the company will project a large overhead burden and, until the contract's completion date, will be unsure whether a job is going to be profitable or not. Also, if equipment costs are included in overhead, the company may be projecting higher overhead burden rates that cause the company to overbid jobs that are light on equipment and underbid jobs that require heavy equipment usage. As a result, good jobs are missed because the bid is too high and the company may win jobs with heavy equipment use, leaving too much on the table, and then struggle to make them profitable. In order to properly allocate equipment costs to individual contracts, the contractor should establish an *equipment cost pool*.

Equipment Cost Pool

An equipment cost pool is similar to the labor cost pool discussed earlier in this chapter. Within the general ledger, certain accounts are used to pool the costs incurred for equipment. These costs are then allocated to the jobs by using an internal equipment rate with the offset being charged to a contra-expense account that is included in the equipment cost pool. Periodically, the equipment cost pool should be evaluated to determine if contracts are being over- or under-charged for equipment costs.

The costs that should be included in the equipment cost pool will vary by contractor and should be determined by company management. Not every piece of equipment held by a contractor is going to be included in the equipment cost pool. However, items that seem significant to management and worthwhile to track should be included.

Practice Pointer

When introducing an equipment cost pool to a contractor, do not be surprised if he or she wants to track every tool ever purchased. There is a difference between tracking the cost of the tool by job and tracking the location of each piece of equipment and item the contractor has purchased. The key point is determining what cost is considered significant to the contractor from a job cost and financial reporting perspective.

Once the pieces of equipment have been determined to be included in the equipment cost pool, management should then establish a budget for each piece of equipment. The budgeting for each piece of equipment will include accounting for the usage, salvage values, interest costs, depreciation, fuel usage, repairs and maintenance, taxes, insurance, and other costs that manage the equipment for that particular contractor. The contractor may perform this evaluation by accounting for the contractor's equipment as a group. However, a more effective tool would be to determine this for each piece of equipment to be included in the pool. This approach views the equipment as a *profit center*.

Equipment Profit Center

In the construction industry, every contract a contractor is awarded is viewed as a profit center. This same profit center philosophy should be adopted when considering the investment a contractor makes in its equipment. The equipment profit center will serve as an effective evaluation tool for the contractor in determining the performance of a particular piece of equipment. Many mid-level to high-end construction software packages have this feature as a separate module. However, many contractors neglect using this important module. The problem with the software packages equipment module is the time and understanding involved in implementing the module to benefit the contractor.

Practice Pointer

Establishing any cost pool or profit center is very challenging for contractors and their staffs. The assessments that have to be made and the various calculations are not what contractors enjoy. The assistance by a contractor's CPA in handling these cost pool and profit center calculations is a great additional service that many contractors will be grateful to have. The CPA must ensure that whatever advice or direction the contractor accepts is implemented at the level of the accounting staff the contractor has employed.

Allocating the costs from the equipment cost pool can be handled using one of several methods. The easiest method in charging the equipment costs from the pool to the individual job is by using the fair market rental rates for the equipment included in the pool. These rates can be obtained from any local equipment dealer or can be downloaded from the Internet.

The use of fair market rental rates is an appropriate method in the sense that it reflects the replacement costs of the equipment and provides consistency among jobs that use both owned equipment and jobs that use rented or leased equipment. The problem with using the fair market rental rates is that the rates are determined to generate profits for the equipment dealers. The goal for a contractor is *not* to generate a "phantom" profit. The goal is to properly allocate costs to individual jobs to determine the jobs' profitability. To recognize a "phantom" profit from the internal equipment rates defeats the purpose in determining a job's true profit margin. Also, estimators could price themselves out of every job if they use fair market rental rates as part of their bid. Competitors that own their own equipment would always have an advantage over a contractor using outside equipment or fair market rental rates.

In establishing internal rental rates for construction equipment, contractors may apply rates arrived at under the so-called "use rate" theory. In applying this theory, the following factors should be considered:

- The cost of equipment, less estimates of its salvage value or rental if it is leased
- The probable life of the equipment
- The average idle time during the life or period of hire of the equipment
- The costs of operating the equipment, such as repairs, storage, insurance, and taxes

A rate may be arrived at that, based on the reported use of the equipment, will serve as a basis for charging the contracts on which the equipment is used. The cost of a contractor's equipment should be allocated to the particular contract on which it is used on a reasonable basis, such as time, hours of use, or mileage.

This use-rate approach has the advantage of spreading the costs of the equipment repair and maintenance over the company's different contracts rather than charging such costs to the contract on which the equipment was being used when a breakdown or maintenance occurs. It is designed to recover all of the costs of the equipment by charging them to individual contracts as part of equipment costs. Even idle equipment costs are assigned to contracts. The rationale being that independent lessors of equipment also recover their idle equipment costs, through rental rates.

Example 8-1

Big Block, Inc. is a mason contractor that has purchased an all-terrain lift as part of its equipment pool for $100,000 in May 2008. In determining the rate to charge on an hourly basis for this lift, Big Block has made the following analysis for year one:

Hours to be used	650
Maintenance costs:	
Repairs and maint. including parts	$ 2,500
Depreciation ($10 per hour)	6,500
Interest costs	9,500
Taxes, insurance, and storage	4,700
Other costs	3,000
Total anticipated costs	$ 26,200
Avg. cost per hour (rounded)	$ 45/hour
Fair market rental rate	$ 48/hour

Big Block, Inc., in this example will charge the jobs a rate of $45 per hour for the piece of equipment. In this example the cost per hour and the fair market rental rate are almost the same. However, the usage rate for Big Block is low for the year. If the equipment were used for a full year, the average cost per hour would decrease and the profitability margin versus the fair market rental rates on the various contracts using the lift would increase. This initial evaluation will need to be done at the time any equipment is acquired. An evaluation of all pieces of equipment should be done continually during the year, but at a minimum annually.

Also, as in our example with Big Block, Inc., the contractor must monitor the job superintendents and project managers. Based on this example, the rates were very similar to that of a temporary rental outlet. An equipment dealer could sway the superintendent with a "special" equipment deal of $42 per hour. The superintendent may rent the salesman's "special" in order to maximize the profit on his job, which he is evaluated. However, the superintendent's view is very shortsighted. The lack of the company's owned equipment use decreases the company's overall profit.

Whatever method is used in allocating the equipment cost pool to jobs will inevitably result in generating a profit or a loss within the equipment cost pool. The point is to charge those costs to the projects that should incur equipment costs and not allow such costs to be absorbed into the company's overhead. To minimize having "phantom" profit and losses being reported within an equipment cost pool requires management's constant evaluation of the rates that management has determined be applied to the various pieces of equipment.

JOB OVERHEAD OR GENERAL CONDITIONS

The words *job overhead* and *general conditions* are used interchangeably by contractors. The theory of including the category of job overhead or general conditions is based on the fact that some costs may be direct costs specifically identifiable to the job and indirect costs that are considered job costs but cannot be specifically identifiable to a job. Many contractors also use the general conditions or job overhead category as a type of intermediate stop for general and administrative costs that are not specifically identifiable but are allocable to contracts. Once general and administrative costs are combined with job overhead, they too can be allocated to activities or tasks.

The cost category job overhead or general conditions is used to emphasize the importance of direct charging of costs when practicable. This is preferable to allocating these costs through the use of cost pools, as mentioned throughout this chapter. Although general conditions or job overhead is direct costs to the jobs, it is usually indirect to the activities or tasks. Thus, the problem of allocating job overhead costs to activities or tasks has not been resolved.

The manner in which to allocate these costs to jobs is similar to the ways previously discussed. They could be allocated over direct labor dollars, labor hours, revenues, subcontract costs, or equipment usage. The method of allocating depends upon the type of contractor and, more importantly, the type of contract being performed. Above all, as with the other allocations discussed, the method of allocation must be reviewed periodically and adjusted to reflect the most accurate method of allocation. Also, the method of allocation should be written and documented in order for consistent application.

KNOWLEDGE CHECK

1. In adapting to bidding and reporting of job profit and loss statements, which set of costs does a contractor generally have a difficult time estimating?

    a. Direct costs.
    b. Indirect costs.
    c. Subcontract costs.
    d. Labor costs.

2. In order to charge owned equipment costs to particular projects worked on by the contractor, which approach should the contractor use?

    a. Equipment cost pool.
    b. Shotgun approach.
    c. 10 and 10.
    d. Full charge to overhead.

3. Which costs incurred by contractors are reasonably allocable to individual contracts but not to the individual tasks within those contracts?

    a. General conditions and job overhead.
    b. Direct labor costs.
    c. Selling, general, and administrative costs (that is, period costs).
    d. Direct material costs.

The Impact on Estimators and Project Managers

Once all of these cost categories, cost pools, and allocation rates have been identified and established, the implementation plan must be communicated throughout the organization. If the communication of the plan is not achieved, the results will be disastrous.

Accounting, estimating, project managers, and superintendents must be made well aware of these costs being allocated and accounted for on jobs. Most companies include these persons or representatives from these groups of persons in the planning and implementation phase. Such involvement and participation is crucial because implementation cannot be accomplished unless the ones responsible believe in the process.

Estimators must be aware of the labor burden rates and equipment rates to properly bid work. If their approach is the "10 and 10" method, they will now understand what must be included prior to determining the "10 and 10." An updated list of labor burden and equipment rates must be available for the estimator to make the most accurate estimate.

If the contractor is obtaining work in a different state, the accounting department must take the initiative in supplying the estimator in having the most accurate information available for that state as it applies to the labor burden rates. Accounting must supply reports in a manner to monitor the various cost pools implemented by management. Any gain or loss created by the cost pools should be evaluated and a decision must be made if changes to the rates are necessary.

Project managers and superintendents must also agree to the process of construction cost accounting. Many project managers and superintendents are awarded based on the profit they bring in on a job they are managing. Additional costs that they do not see or feel are apart will only lead to frustration and complaining from the project managers and superintendents. However, they must understand that the profit center they are responsible for must include all the necessary costs in order to properly run the organization.

ALTERNATIVE OVERHEAD STRATEGIES WHEN CONTRACT VOLUMES ARE LOW

Based on our knowledge of the construction industry, we understand that fluctuations of a contractor's volume can be quite significant from one year to the next. Based on such fluctuations, a contractor must understand that cost allocations must be addressed and adjusted based on the situation in which the contractor finds themselves.

When volumes are low and bids are highly competitive, the contractor's goal should be to cut its losses. To cut its losses, a contractor may want to consider segregating its overhead and equipment pool expenses between fixed and variable costs. On the equipment pool, there are certain ownership costs (depreciation and interest burden) that are fixed and will be incurred regardless of usage. There are also the variable costs incurred in operating the equipment, such as repairs, fuel, maintenance, and so on. The contract may want to consider minimizing or eliminating the variable costs in order to calculate an equipment rate, so that budgeted variables costs do not prevent the contractor from losing bids during the tight bidding.

Allocating other items, such as general overhead, works in the same manner. Certain costs are likely to be the same, regardless of whether a contract is obtained or not. Therefore, reducing the overhead allowance for such fixed costs items is useful if the reduction will have a bearing on obtaining contracts during a tight market.

It should be noted that these strategies should be implemented for short time periods and only in circumstances where the bidding is highly competitive. Long-term use of these alternative strategies will result in having high bid spreads in not-so-competitive times. Also, these alternative strategies are not considered to be the best method for properly accounting for job costs within the accounting system. The strategies are modified in order to estimate contracts during tight times and are not considered a long-term strategy.

Selling, General, and Administrative Costs

Once the contractor has gone through the process of identifying the direct wages and associated labor burden, the materials and subcontract costs, the equipment charges for owned equipment, and the allocations for general conditions or job overhead, the contractor can then take a close look at its true overhead: selling, general, and administrative expenses.

Simply put, the selling, general, and administrative expenses are those expenses that an organization will incur in the event that the contractor has zero contracts in progress. In determining the amount of selling, general, and administrative costs, it should not be viewed as a "worst case scenario" approach. Instead, the contractor should review its general and administrative costs over the past few years and determine the true overhead for the company.

In actuality, the general and administrative costs for the contractor are those costs that can actually be budgeted during the year. Revenues and costs of sales vary from contract to contract based how the contract is estimated and awarded. Because of the bid factor, a contractor does not have much control in determining the particular level of gross profit he or she anticipates for the year. That is why budgeting general and administrative costs is so important.

Break-Even Analysis

Many accountants and contractors alike understand the principle behind a break-even analysis. Basically defined, the break-even point is the level of revenues a company must achieve at a certain gross profit margin in order to cover a company's overhead. This is very important in the construction industry.

Practice Pointer

In discussing the break-even analysis with a contractor, request from the contractor what its average gross margin is on contracts. Once the average gross margin has been determined, review the company's overhead for the past three years and obtain a monthly average. Perform a break-even analysis based on this information. The contractor will be surprised at how much revenue he or she must achieve in order to obtain a break-even year. Most contractors have individual jobs during the year that contribute a significant portion to the gross margin. When averages are used, the contractor may be amazed at the expectation set in order to break even.

In determining the break-even analysis for a contractor, the contractor must be able to estimate the general and administrative expenses it expects to incur over the fiscal year. Our discussions about construction costs up to this point should provide a good background for arriving at the company's true overhead.

Once the general and administrative expenditures are estimated, the contractor can use the simple chart:

Revenues	General and Administrative Costs						
4,500,000	2.22%	4.44%	6.67%	7.78%	8.89%	10.00%	11.11%
4,000,000	2.50	5.00	7.50	8.75	10.00	11.25	12.50
3,500,000	2.86	5.71	8.57	10.00	11.43	12.86	14.29
3,000,000	3.33	6.67	10.00	11.67	13.33	15.00	16.67
2,500,000	4.00	8.00	12.00	14.00	16.00	18.00	20.00
2,000,000	5.00	10.00	15.00	17.50	20.00	22.50	25.00
1,500,000	6.67	13.33	20.00	23.33	26.67	30.00	33.33
1,000,000	10.00	20.00	30.00	35.00	40.00	45.00	50.00
500,000	20.00	40.00	60.00	70.00	80.00	90.00	100.00
	100,000	200,000	300,000	350,000	400,000	450,000	500,000

The use of the preceding chart is very helpful throughout the year for a contractor. The contractor's volume can drastically change from one year to the next, but the contractor's general and administrative costs are somewhat fixed unless measures are taken to reduce the company's overhead. As a contractor increases volume, the smaller the percentage becomes to cover overhead. A similar graph can be done comparing gross profit to general and administrative costs.

Case in Point

The author knew of a contractor that concentrated on meeting his break-even point by focusing on gross profit margin. At the beginning of each year the contractor would pencil in on the board the annual budgeted overhead figure for the company. As gross margins were earned, the contractor would slash through the overhead figure and establish a new amount. The new amount represented how much overhead the company had to earn prior to breaking even. All who entered the office knew at any given month where the contractor was in regard to overall profitability for the year.

The understanding of a company's break-even point can be very beneficial to estimating and bidding projects. If the contractor has made significant gains in covering its overhead for the year, the company can assess its needs in increasing or decreasing the overhead projections when submitting bids. Once the company has achieved a break-even point, any additional overhead bid into a project is actually profit added to the company's bottom line.

Case in Point

A contractor reached the understanding of how the theory of construction costs worked within the construction industry. In using the theory of break-even analysis, the contractor determined that he or he had reached the break-even point in early September. Due to extremely tight bid lettings, the contractor significantly reduced or eliminated overhead estimates on any job that could be completed prior to year-end or shortly subsequent to year-end. Based on this understanding, the contractor was awarded 60 percent of those contracts pursued (four times the winning percentage) due to the overhead break-even analysis. The result was added profit to the overall company.

The break-even analysis is not a perfect tool in determining what should be added to a project in order to win bids. It is simply a tool to allow the contractor to measure how well on track it may be in obtaining profitability on a company-wide basis.

KNOWLEDGE CHECK

4. The level of revenues a contractor must achieve at a certain gross profit margin in order to cover its overhead is called which of the following?

    a. Overhead allocation.
    b. Break-even analysis.
    c. Backlog.
    d. Work-in-process.

Summary

The understanding of construction costs is very important to the success of a contractor. Most contractors understand the direct and identifiable costs that go into completing a project. It is the indirect costs that are usually missed. The accounting for labor burdens, equipment burdens, and overhead allocations are costs that can make attractive, profitable jobs soon become disasters in the making. The CPA is in the best position to benefit the contractor in obtaining an understanding as it relates to these indirect costs. A thoughtful, well-planned approach will prove to be a win-win in any relationship between the CPA and contractor client.

Chapter 9

ASSISTING THE FINANCIALLY TROUBLED CONTRACTOR

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Identify the inherent risks of failure in the construction industry.
- Recall common warning signs of a failing construction contractor.
- Identify services that a CPA might provide to assist contractor clients in avoiding failure.

INTRODUCTION

One of the industries where companies are most prone to failure in the United States is the construction industry. Generally, the following are the types of entities which have historically been more susceptible than others as it relates to business troubles:

- Service-oriented industries
- Rapidly growing companies
- High leveraged companies
- Closely held businesses
- Family-owned businesses
- Companies lacking a proprietary product

Based on the preceding criteria, it would appear that 99 percent of all construction companies meet all of these criteria.

In addition, recent studies have indicated that businesses rise and fall based on leadership and the main reasons for business failures are due to the following:

- Poor business planning
- Poor financial planning
- Poor marketing
- Poor management

This list would definitely point toward small companies that enter into the construction industry.

Value Added Service

Most contractors are in the construction business because they perfected a trade in how to build something. Usually this is from years of experience out in the field working for other contractors. However, in gaining their experience of how to build, they did not learn how to run a company. The CPA is in the best position to assist the contractor in learning how to manage their company. When reviewing the four reasons for business failure indicated by US Bank, 75 percent of those reasons are issues the CPA is specialized in.

Why would this industry, one that we have chosen to service, seem to be so prone to failure? What are the issues that could be considered warning signs of a contractor heading toward failure? What guidance can we as the CPA provide to assist our contractor clients in avoiding failure or to assist them out of being financially troubled? These questions we will discuss as we go through this chapter.

KNOWLEDGE CHECK

1. In studies conducted by the Turnaround Management Association and U.S. Bank, the status of contractors being considered for financially troubled companies is that of _____.

    a. High risk.
    b. Low risk.
    c. Moderate risk.
    d. Risk is not a consideration.

Why Contractors Are Prone To Failure

Based on our introduction to this course we noted resources that highlighted reasons and characteristics of companies that are more than likely prone to business failure. We also indicated that many of those in the construction industry, in particular the smaller contractor, meet the different reasons and characteristics. So the question is, "Why?"

The Nature of the Beast

One of the reasons why contractors are prone to failure qualifies for the inherent meaning of the statement, "It's the Nature of the Beast." Most contractors live and breathe on a job-to-job basis. However, large contractors generally have the advantage of employing a marketing person to continually look for new jobs or have a developing division whereby they enter into contracts that are self-performing. This is nearly impossible for the smaller contractor. The smaller contractor has to get on bidding lists where their competitors are receiving the same bidding information.

Then again, there are certain contractors, regardless of size, that are dependent on government progress. For example, a highway contractor has very little effect on state highway or federal highway spending with their internal marketing program. It is all based on the availability of funds.

The Nature of the Beast for the construction industry can therefore be technically interpreted as a cyclical industry. Simply put, the revenues will rise and fall depending on outside or external forces that are not in control by the individual contractor. Because of this the contractor must adapt to both the highs and the lows experienced by the construction industry. Without proper business planning, financial management and financial strength, a contractor could face many struggles in such a tough industry.

Ease of Entry

As we mentioned earlier in this chapter, most contractors get their start in the construction industry by working for a contractor. While working for a contractor they develop and fine-tune the skills needed to perform their work. Once they feel confident and receive the spirit of entrepreneurialism they form their own company and embark on their journey in the construction industry. Congratulations and good luck! There is nothing wrong with this situation. The art of capitalism is what has made this country great.

However, the "Nature of the Beast" (those influences of external forces) becomes an issue. Yes, our contractor in the preceding paragraph has become a skilled craftsman, but is the work abundant to welcome another contractor to the scene.

The problem we see in the construction industry is that the spirit of capitalism may happen quite a bit. Since 1964, the commercial construction market has seen relatively small overall growth, whereas the number of contractors over the same period of time has grown substantially. The market keeps getting tighter and tighter.

Practice Pointer

The overall construction market can differ dramatically at different times. The residential construction market has been in a boom when the commercial market has been poor. Different areas of the country may experience dramatic growth due to local issues when other parts of the country are flat. A successful contractor can no longer perform strictly in their local market. The contractor must look outside their geographic region to continue to be successful.

Warning Signs for Potential Business Failures

Throughout this course and the prequel to this course, *Construction Contractors: Accounting, Auditing and Tax*, we mention many warning signs for auditors, sureties, cash flow issues, fraudulent transactions, and so on. All of these warning signs that we have mentioned are also warning signs of potential business failure. To recap some of these warning signs we have provided the following list:

Surety Warning Signs

- Poor financial accounting and reporting systems
- Turnover of personnel
- Change in contractor's business
- Maximized lines of credit
- Poor estimating and project management skills

Cash Flow Warning Signs

- Receivables and payables out of sync
- Decrease in available cash
- Writing accounts payable checks without mailing them
- Lack of payment of payroll taxes and other payroll liabilities
- Numerous underbillings
- Large underbillings

Fraud Warning Signs

- Re-aging of accounts receivables
- Shifting of costs from completed work to in-progress work or vice versa
- Booking unapproved change orders
- Recognition of substantial portion of claims without documentation or substantiation
- Recording greater percentage complete than what is actual

Other Business Failure Warning Signs

- Lack of an effective cash flow system
- No budgeting process
- Gross margins decreasing while the backlog of work is increasing
- Low employee morale
- Inability to forecast job status at varying stages of completion

Are these warning signs easily to be determined by the CPA? They should be.

Saving the Financially Troubled Contractor

Now we must get to work. We have either been requested by a troubled contractor to provide assistance or our very own contractor client is spiraling downward and drastically needs our assistance.

So what is our approach? First, you must carefully assess the situation. The last thing you want to do is put yourself or your firm in a situation where your timely efforts become *pro bono*. That is, we must make sure that saving a financially troubled contractor is worth our time. As we will discuss later, the saving of the financially troubled contractor is more of a commitment by the troubled party. We do not want to spend hours and receive no compensation for our commitment due to the lack of commitment by the troubled party.

Practice Pointer

The author met a consultant who specialized in assisting financially troubled companies including contractors. The consultant traveled all over the country strategizing with business owners in recovering from troubled times. The compensation rate was $250 per hour. In our discussion the issue of ensuring that payment was discussed. The consultant informed me, prior to arrival they discuss with bankers and verify funds that at least three days of fees were restricted in cash to compensate them for expenses and time. During the engagement, billings were prepared, remitted, and collected every two days. When payment could no longer be made, a final meeting was performed between the consultant and the client. The consultant (who had three days in billings including the final meeting) would collect from the restricted cash. There was never a receivable from the troubled company.

The next step in saving the financially troubled contractor is discussing with management their commitment to the organization. The following questions should be asked:

- What is the purpose of our construction company? What are we trying to accomplish? These two questions are very important. Many of these troubled contractors did not develop any form of business plan when they started the company. Because there was no plan, the struggling contractor has been blown off course of what they mastered in their trade. The contractor could have gone from being a mason to believing the money was in the general contracting market. This question takes us back to the basics of why we went into this business to begin with.
- Should we throw in the life preserver or throw in the towel? This is the most difficult question to ask oneself. Nobody, especially a contractor, wants to admit defeat. However, the company may be too far-gone to begin a turnaround plan, but the contractor will not admit it until the bankruptcy papers are signed. Perhaps the contractor will not admit failure because they know there is a job coming up for bid that they could win to keep the company afloat. However, as previously mentioned, a contractor can have a number of jobs in backlog with very little gross profit to allow the contractor to make a profit after overhead is taken out. A company's volume has no bearing the company's profitability.
- Is management willing to change? One person defined insanity as trying the same thing over and over and producing the same failing result. Management's willingness to change is the most important issue that has to be discussed. Management must be willing to admit that what they have been doing in the past has not worked and something different must be introduced and followed.

Case in Point

A new flooring supplier had incurred a great deal of business their first two years in operation. They subcontracted out the installation and did not apply any markup. However, they were operating in the "red" and showing payables in excess of receivables by more than 50 percent. The absentee owner requested us to review the situation. The problem was the fierce competition. The sales people were going out and matching or beating the competition's prices. The markup added to the materials was falling short of the amount needed to break even. After numerous discussions and attempts to sell at higher prices did not have a positive effect. The owner made the decision to close its doors. The owner understood the factors causing the losses and understood he could not get the volume discounts his competitors could achieve.

KNOWLEDGE CHECK

2. To assist a financially troubled contractor, one must understand if the company has

    a. A willingness to change.
    b. The financial statement needed for change.
    c. The personal assets to change.
    d. The financial assets to change.

Go From Attitude to Action

Once you have achieved a commitment from the troubled contractor, it is time to put that attitude into action. So where does one start with the contractor?

We Must Look at What We Have on Hand

What jobs are in progress? What is their true job profit? How many months in overhead do we have in backlog? What equipment do we have on the books? What is our equipment utilization? How much debt do we have on the books? Do we have claims that exist? What makes up accounts payable? Where are we at on bonding? What is our relationship with our banker? What do the owners have as far as personal assets? What is our true company overhead?

These questions are not all-inclusive. The questions must be asked and honest answers must be provided. With the responses to these questions will help us formulate what one would call our turnaround plan.

We Must Prepare the Turnaround Plan

A turnaround plan is much like a business plan except it is a business plan in crisis mode. Now instead of writing about our dreamy future plans and all of the success we will have when the plan comes together, we are focused on how to get out of the mess we created because we did not establish a dreamy future plan to begin with. Some things we should analyze and plan based on the sample questions asked in number one include the following:

- Develop a cash flow model of our current jobs in progress: We want to analyze if we will be having excess cash from the jobs in progress to pay our overhead requirements. Based on the cash flow model, we may need to make decisions about what is included in overhead and immediately start reducing our overhead costs.
- We should analyze our equipment utilization. Contractors do not like to sell their equipment because one day they will need it and the equipment is so expensive to rent. However, by selling the equipment we will reduce any debt associated with it, reduce our cash flow overhead from current monthly payments, and hopefully produce excess cash from the sell. The excess cash is critical in facilitating our turnaround plan.
- If we have claims outstanding, we should seek legal counsel and base the recovery fees on a contingency basis. Cash is not required with an attorney's retainer. Any excess funds recovered are critical in facilitating our turnaround plan.
- Set up terms with our most important vendors: Suppliers will work with a contractor that works with them. This may require certain contract negotiations to be reworded for when materials are delivered to the job site.
- Once the plan is written, we should provide a copy to our financial institution and our surety. We should request assistance from the banker on additional lines of credit if we provide a lock-box arrangement on future billings. The surety may wish to see the plan with *pro forma* financial statements based on our turnaround plan of action.

- If the owners are committed to revitalizing their company, they should consider making a significant personal investment. This may include reducing their salary, eliminating personal benefits they derive from the company (automobiles, family payroll, and so on). This also may include a contribution to the company or a change in their personal lifestyles. Upon introducing these drastic measures one should see if the owners are truly committed to turning the company around. If personal adjustments are not going to be done, you will eventually see that the owner may not be as committed as you think.
- Last but not least, the owner has got to reduce overhead. We speak about reducing overhead in other chapters, but it is critical for the troubled contractor to eliminate unnecessary spending. Introduce a budget for the next 3–6 months of overhead expenditures based on the contractor's present backlog. Such overhead must be deemed their cash flow overhead. This would eliminate depreciation but add debt payments including principal and interest.

IMPLEMENT THE TURNAROUND PLAN

Once the plan is developed, the plan must be communicated to all of management. All levels of management must be committed to the plan. However, implementation is also dependent upon communication to outside parties such as the bank, suppliers and the surety. Such communication may require that all involved must be aware of the entire situation. If not, team members may believe that the plan is being put into action just to make the owner more money (because they are unaware as to the financial problems).

ACCOUNTABILITY TO THE PLAN

For any business plan (turnaround or initial), it is critical that you measure the performance of how the plan is performing. You must measure your progress to determine if the plan is being followed and if the suggestions are working. The *Construction Accounting Deskbook* published by Harcourt Professional Publishing recommends a "report card." The report card would contain measurements important for, or even critical to, the success of the plan, such as the following:

- Bank line availability
- Underbillings
- Accounts receivable over 60 days
- Overhead as a percentage of revenue
- Working capital
- Backlog of work
- New work per month

The report card allows the troubled contractor to benchmark themselves to their turnaround goals. The measurement should reflect the troubled contractor's position at the inception of the turnaround plan and the months that follow while the plan is in action. The following is a sample of a report card.

Category	Benchmark 6/30/xx	Goals 12/31/xx	July	August	September
Bank Line	$6.4	$3.4	$5.35	$5.25	$4.80
Underbillings	$2.0	$1.0	$2.2	$2.05	$1.87
AR over 60 days	105 days	55 days	92 days	89 days	75 days
Overhead %	19%	14%	18.5%	16.8%	15.2%
Working Capital	$(1.7)	$.500	$(1.2)	$(.970)	$(.675)
Backlog of Sales	$6.1	$10.0	$5.75	$7.85	$9.1
New Work/Month	$750k/Mo	$1.8M/Mo	$900k/Mo	$1.1M/Mo	$1.35M/Mo

KNOWLEDGE CHECK

3. One of the keys to success for a turnaround plan is the ability for management to

    a. Have completed the turnaround plan in less than 12 months.
    b. Make itself accountable to the plan.
    c. Require an audit of the contractor's financial statements.
    d. Hire an outside party become involved.

Summary

Business failures are a part of life. The sad part is that many of these failures occur in the construction industry. CPAs sometimes distance themselves from troubled situations with concerns of payment for their services provided. However, when the failure is a result from one of our clients, we then feel obligated to assist and do so with our fees at risk. Instead of avoiding the problem contractor, we should become involved and secure collection of our fees. By having the mindset of change management in implementing a proper turnaround plan, we can assist the failing contractor in getting back on their track to success. Our assistance with this matter will not only bring back a successful contractor, but also win you a client for life.

Chapter 10

AUDIT RISKS OF A CONTRACTOR

Construction Contractors Advanced Issues
By Dale Ruther

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Identify 10 of the most risky areas when auditing the contracts of a contractor.
- Recall common audit procedures that must be performed to address the specific risks facing a construction contractor.

INTRODUCTION

The audit of a contractor in the construction industry is very unique as opposed to most industries. Generally, auditors use a balance sheet approach to the audit when auditing most industries. In the construction industry the approach is not that of a balance sheet. In fact, the approach in the construction industry is not even through the income statement. Instead, the construction industry looks at the individual contracts worked upon during the year. Auditors who ignore the contracts or assume only a balance sheet approach to the audit of a contractor may be open to significant material errors as part of their audit. This chapter will take an in-depth look at the audit risk of a contractor as it applies to the audit of the individual contracts.

Audit Risk and the Audit Risk Model

In considering the audit risk that an auditor will face in auditing a contractor, it is very important that we review what an auditor's responsibilities are toward audit risk. For a material misstatement to occur in the financial statements without being detected, three things must happen:

1. A material misstatement must occur and exist.
2. If such a material misstatement occurs, the client's internal control must fail to prevent or detect it.
3. The auditor's procedures, whether analytical or substantive, must fail to detect the material misstatement.

Practice Pointer

Under the risk assessment standards, the auditor estimates the maximum level of misstatement that could be tolerated in the financial statements without causing a reasonable person's judgment about them to be significantly changed or influenced. The reasonable person is deemed the user of the financial statement. Based on this, the auditor should use caution when planning materiality. The use of sliding scales and other ranges and percentages may not be what the user of the financial statement may assume. The question that should be asked is, should information other than operating information be used to determine planning materiality? The answer depends on the user. One might consult a contractor's user (for example, a surety) when determining what should be used as a materiality calculation. The construction auditor may want to use gross profit, working capital, or equity as a basis for determining materiality and tolerable misstatement.

In considering the risk associated with a material misstatement occurring in the financial statements, the auditor assesses three types of risk:

1. Inherent risk – The susceptibility of an assertion about a class of transaction, account balance, or disclosure to a misstatement that could be material, either individually or when aggregated with other misstatements, before consideration of any related controls.
2. Control risk – The risk that a misstatement that could occur in an assertion about a class of transaction, account balance, or disclosure and that material, either individually or when aggregated with other misstatements, will not be prevented, or detected and corrected, on a timely basis by the entity's internal control.
3. Detection risk – The risk that the procedures performed by the auditor to reduce audit risk to an acceptably low level will not detect a misstatement that exists and that could be material, either individually or when aggregated with other misstatements.

Inherent risk and control risk differ from detection risk in that they exist independently of the audit of financial statements, whereas detection risk relates to the auditor's procedures and can be changed at the auditor's discretion.

As auditors, we take these risks and form a relationship accounted for in our audit risk model expressed as follows:

$$\text{Audit Risk} = \text{Inherent Risk} \times \text{Control Risk} \times \text{Detection Risk}$$

The inherent risk and control risk bear an inverse relationship to that of detection risk. The less the inherent and control risk the auditor believes exists, the greater the detection risk the auditor can accept.

In using the audit risk model, the auditor is hoping to achieve an efficient and effective audit that is thorough and will identify material misstatements. The auditor also hopes to achieve an efficient audit in which unnecessary auditing procedures will not be performed. In understanding the nature of what the auditor is auditing and the appropriate application of audit procedures, the auditor will have an effective and efficient audit.

The use of the audit risk model in the audit of construction contracts is no different. However, the auditor must obtain an understanding of the procedures designed in various audit programs in order to achieve the most effective and efficient audit.

Practice Pointer

The audit professional should use caution when completing an audit program in the audit of construction contracts. Each step within an audit program has a certain amount of significance. The response of "N/A" (Not Applicable) or "NWP" (No Working Paper) to an audit program step could be a potential hazard in the event the audit working papers are brought into a court of law. If such a response is deemed acceptable for the audit program step, the auditor should follow up with an explanation of why that step was not considered necessary. Such explanation needs to meet the documentation requirements of AU-C section 230, *Audit Documentation*.

Contractor Audit Risk Areas

The audit of a contractor is very different from many other industries. As we have mentioned, the auditor should approach the audit using a "contract" approach instead of the traditional "balance sheet" approach. The riskiest area in auditing a contractor will be at the contract level. Auditors should consider this approach because of the contract's impact not only the income statement but the balance sheet as well.

When assessing the risks of a contractor at the individual contract level, the following "top 10" (or 11 in this case) should be considered by the auditor:

1. Assessing the risk of the individual contracts
2. Determining whether the contracts have unapproved change orders or claims
3. Auditing estimated costs to complete
4. Confirmation of the contract with the owner or the prime contractor
5. Reading of the contract (and other files)
6. Workers' compensation issues
7. Contractor's accounting systems
8. Fraud in the financial statements as it relates to the individual contract level
9. Understanding the use of the financial statements by third parties such as sureties and bonding companies as it relates to the contracts schedule reported upon
10. Evaluating the contractor as a going concern
11. Implication of deferred taxes

The auditor of a contractor must address each of these issues in order to achieve an effective audit. The manner in which these items are addressed will affect the auditor's efficiency.

Practice Pointer

It has been strongly stated that the audit of the individual contracts is an extremely important part of the audit of a contractor. Even though the focus of this chapter will deal primarily with the audit of the construction contracts, the audit of other significant components of the financial statements must not be ignored. The auditor should assess the audit risk as a whole and on the significant account balances of the entity.

Assessing the Risk of the Individual Contract

People do not wake up one day and decide they are going to open a construction company. In most instances, the contractors know and understand what they are doing when building a project. The contractor has either grown up in the industry or has been associated with the construction industry in some manner for a number of years. However, at times an individual contract or a group of individual contracts can make or, even of greater concern, break a contractor.

For example, a contractor who averages 5–10 jobs with a total annual volume of $5 million is taking an incredible step in taking on a single contract for $5 million. A concrete contractor familiar with slabs less than 50,000 square feet may lose the farm by bidding on a project that is 500,000 square feet. A contractor from Texas that has never been out of state is in a different situation when faced with the opportunity of working in Alaska. Simply put, the individual contract bears a great deal of risk.

For the auditor, the individual contract has a lot to do with planning the audit engagement. Risk should be assessed with each individual contract because of the significance that contract could play in the overall organization's financial situation.

In planning and performing the audit, the auditor should obtain a schedule of contracts that contain the following contract details:

- Contractor's name or assigned job number
- Type of contract – fixed price, T&M, cost-plus, and so on
- Contract price and change orders
- Original cost estimate and current estimated total contract cost
- Actual costs to date
- Estimated costs to complete detail
- Billings to date, cash payments to date, and receivable and retention balances
- Penalty or bonus features
- Bonding requirements
- Financing requirements
- Location and description of the project
- Estimated percent complete and estimated completion date

Practice Pointer

Earlier we stated that our audits should be performed both effectively and efficiently. In order to do this, we must identify audit procedures that can be done in advance and performed by the audit client's staff in order to use our time as effectively and efficiently as possible. The criteria contained regarding the contract details should be presented to the client a month before year-end. Three items previously noted will not be able to be fully completed, but all the other criteria can be obtained and preliminary assessments can be made even without the other three items.

The assessment of risk can be done in three simple phases once the client's unadjusted job schedule is received:

- Phase one – Determine the contracts that are material to the overall financial statements and the stage of completion for those contracts at year-end. Materiality determinations should already be completed and should be focused on the actual costs incurred to date. Any findings found during the audit while searching for liabilities will require the auditor to recalculate the contract schedule in determining a contract's material impact due to such findings. The auditor should also focus on the level of completion. The contracts that are less than 20–25 percent or more than 90 percent complete represent a lower risk. The focus starts here because contracts not meeting these two tests will have a low impact on our recognition of revenue based on the percentage of completion formula. Once a contract qualifies as meeting these two criteria, the contract then passes to phase two.
- Phase two – The next step is to start conversing with the contractor, project manager, estimator, and other parties involved. Follow the guidance noted in the chapter on AU-C section 240, *Consideration of Fraud in a Financial Statement Audit*, when determining to whom we should discuss the level of contract risk associated with the individual contracts. In phase two the auditor wants to gain an understanding as to the qualifying contracts status. The inquiries should be directed at the type of contract, the timing and scheduling of the contract, location, weather, bid spread, subcontractor bonding and performance, owners, and other concerns that we may have regarding the contract.
- Phase three – After being screened through the first two phases, the contract must be subjected to phase three of the assessment process. A project manager or superintendent is a much better person to communicate with regarding the concerns of phase three. Phase three reviews the abnormalities of the contracts such as profit fade or under- and overbillings. Contracts may have significant variances and be flagged by procedures identified in phase three that were not subject to the first two phases. For these contracts, the procedures performed in phase two may need to be employed due to the variances discovered.

The following exhibit may provide the auditor some assistance with these procedures.

Exhibit 10-1 Assessing Risk of Individual Contracts Table of Risk Factors

Factor	Lower Risk	Higher Risk
Phase One: Review Schedule of Uncompleted Jobs		
Percent complete	0% – 25 % > 90%	25% – 90%
Size of project	Relatively small job	Relatively large job
Phase Two: Make Inquiries of Management		
Type of project	Simple, routine	Complex, one of a kind
	Within contractor's expertise	Not within contractor's expertise
Timing and scheduling	Short-term project	Long-term project
	Work is on schedule	Work is falling behind
	Comfortable time frame	Accelerated time frame
	No penalties for late completion	Significant penalties for late completion
Location	Established area with past successful projects	New area
	Materials and labor readily available	Remote area – materials and labor not readily available
Weather	Low susceptibility to adverse weather	High susceptibility to adverse weather
Owner/Investor	Significant previous contact	Little previous contact
	Solid financial position	Weak financial position
Subcontractors	Large portion of work performed by subcontractors	Small portion of work performed by subcontractors
	Significant previous contact	Little previous contact
	Solid financial position	Weak financial position
	Significant subcontract agreements finalized	Significant subcontract agreements not finalized
Bid spread	Tight bid results	Significant variances in bid amounts
Phase Three: Obtain Detailed Information		
Profit fade	No significant profit fade	Significant profit fade
Underbilling	Normal or nominal underbilling	Unusual or significant underbilling
Type of contract	Cost-type, clear definition of reimbursable costs	Fixed-price
		Cost-type, difficult to determine reimbursable costs
Claims	No claims	Significant claims

KNOWLEDGE CHECK

1. What timing and scheduling situation will cause a job to generally be riskier?

    a. Short-term job.
    b. Cost plus contracts.
    c. Job that stretches out over a long time frame.
    d. On schedule progress.

DETERMINING WHETHER THE CONTRACTS HAVE UNAPPROVED CHANGE ORDERS OR CLAIMS

Revenue recognition is one of the more difficult areas to audit in contractor clients. Our audit procedures in determining the method of revenue recognition of our audit clients must be documented and tested for every audit. Generally for contractors, the percentage of completion method will be the method of revenue recognition employed. One of the important components in recognizing revenue through the percentage of completion formula is the contract price. The auditors of contractors must determine whether the contract price that is being used in the percentage of completion formula is reasonable.

In general, the contract price is the estimated revenue that a contractor expects to realize from the contract. It is determined primarily by the terms of the contract and the basic contract price. The contract price could be fixed or it could vary significantly based upon the terms and type of contract involved. The final contract price may not be known until the parties involved have fully satisfied their obligations. Because of this, careful consideration and professional judgment must be exercised in assessing contract price.

Change orders are modifications of an original contract that effectively change the provisions of the contract without adding provisions to the contract. Change orders may originate from the contractor or could be originated by the customer. Many times change orders go without pricing. This is done because the work has been defined but the pricing of the work needs to be negotiated. Because of this many change orders are the cause of disputes that result in claims.

The treatment of change orders depends upon the underlying circumstances associated with the change order. These underlying circumstances are never consistent and are different with, each customer. Therefore, change orders need to be evaluated according to each change orders characteristics and the circumstances in which they occur.

When change orders have been approved, the contractor will adjust the contract price and factor the estimated costs to complete of the change order into his or her uncompleted contract schedule. These changes will reflect the proper under- or overbilling associated with the work already performed in conjunction with the change order and be reflected properly.

Accounting for unapproved (sometimes referred to as un-priced) change orders depends on the circumstances and characteristics in which they occur. The accounting for unapproved change orders depends on whether it is probable the contractor will recover the cost of the change order. Some of the factors the auditor should consider in evaluating whether recovery is probable are

- customer's written approval of the scope of the change order;
- separate documentation of the change order costs that are identifiable and reasonable; and
- entity's experience in negotiating change orders.

If it is not probable that the costs of the change order will be recovered, the contractor should expense the costs involved and the estimated cost to complete should be revised.

If it is probable that the costs will be recovered through a change order, the contractor has two alternatives in how to treat the unapproved change order:

1. The costs may be deferred until the change order is approved.

2. The costs may be recognized as a contract cost, and the contractor may recognize revenue associated with the contract in the same amount, thereby having a zero effect on the contract's profit.

Because the substantiation of an amount of future revenue is difficult, revenue in excess of the costs attributable to unapproved change orders should only be recorded in circumstances in which realization is assured beyond a reasonable doubt. Reasonable doubt may be provided based on the auditor's experience and history with the client or through performing subsequent procedures prior to issuance of the auditor's report.

The auditor should perform substantive tests when recording unapproved change orders depending on the materiality of the change order. Steps the auditor should consider when auditing change orders should include

- vouching the accumulated costs associated with the change orders;
- evaluating whether the costs relate to work within or outside the scope of the contract;
- evaluating reasonable claim damages, if necessary;
- making an evaluation of the contractor's past success in negotiating and settling similar types of claims and document such evaluation; and
- assessing the likelihood of the contractor pursuing a claim against the owner (for example, major customer).

In the event the unapproved change order becomes a claim, certain things must be demonstrated to recognize the claim as contract revenue. In order to recognize revenues associated with a claim, the contractor must be able to demonstrate that the claim will result in additional contract revenue and that the amount can be reliably estimated. Those two requirements give rise to the following four criteria, all of which must be met:

- The contract, or other evidence, provides a legal basis for the claim; or a legal opinion has been obtained, stating that under the circumstances there is a reasonable basis to support the claim.
- Additional costs are caused by circumstances that were unforeseen at the contract date and are not the result of deficiencies in the contractor's performance.
- Costs associated with the claim are identifiable or otherwise determinable and are reasonable in view of the work performed.
- The evidence supporting the claim is objective and verifiable, not based on management's "feel" for the situation or on supported representations.

If the foregoing requirements have been met, revenue from a claim should be recorded only to the extent that contract costs relating to the claim have been incurred. If the amounts recorded are material, such amounts should be disclosed in the financial statements. Costs attributable to claims should be treated as costs incurred to date for the contract. The disclosures required are as follows:

- The total receivable
- A description of the nature and status of the principal items comprising the amount
- The portion, if any, expected to be collected after one year
- Revenues from claims recognized
- Total costs recognized in relation to the billed or unbilled amounts
- The basis on which the items are recorded (for example, costs or realizable amount)

AUDITING ESTIMATED COSTS TO COMPLETE

The auditing of accounting estimates is promulgated by AU-C section 540, *Auditing Accounting Estimates* which requires the following steps as they relate to estimates:

1. Review and test the process used by management to develop the estimate.
2. Develop an independent expectation of the estimate to corroborate the reasonableness of management's estimate.
3. Review subsequent events or transactions occurring before completion of fieldwork.

Review and Test Process by Management

In order to review and test the process by management, we must obtain an understanding of the process employed by management in developing these estimates. The process should not just be the estimate made at the time of the original bid. The process should be ongoing. By doing this we should look at the internal control policies and procedures the contractor has in place to make such an assessment. Chapter 2 of this course can assist the auditor in determining what procedures should be considered when assessing a contractor's estimating process.

Once we have obtained the understanding, we should test the process. The testing of the estimating process is done by performing a profit fade analysis. A profit fade analysis is done by comparing the jobs that were in progress at the end of the prior year to those same jobs completed in the current year. The auditor should focus on significant fluctuations in the gross profit margins. An increase or a decrease should be investigated. To make this test more effective, the analysis could be performed by the estimator, project manager, or superintendent.

Practice Pointer

The estimating process should be deemed a routine process for contractors. Controls should be in place. The risk assessment standards may reflect that the use of estimates is deemed a "non-routine" transaction. However, when you look at the construction process and the importance to determine where a contractor stands on a particular project, the use of the estimate should be deemed routine. Because of the classification of the estimates being a routine transaction, the lack of producing estimates on an on-going basis for a contractor could be deemed a material weakness for the auditor.

Developing an Independent Expectation

In construction, the development of an independent expectation of a contract's accounting estimate may be somewhat difficult. However, there may be some hope for the auditor in this area. The following are a few suggestions that may be beneficial in developing the independent expectation:

- Be aware of the contractor, project manager, or estimator's performance history. Use the profit fade analysis in determining the performance history. The profit fade analysis schedule should be maintained from year to year and made a part of the contractor's permanent file and be used each year in assisting with the audit of estimates.
- Compare the actual costs incurred to date with the budgeted amounts. Many software programs allow the contractors to enter revised estimates into the accounting system. The auditor should review these actual to budgeted amounts and calculate the estimated costs to complete based on his or her accounting system.
- Discuss the contract with job personnel. Get away from the contractor's personnel who are providing the estimates and clarify your understanding with field personnel such as the project manager or the superintendent.

Review Subsequent Events or Transactions

The most effective method in determining the appropriateness of a contractor's estimate is the passage of time. Prior to issuing any audit report, the auditor should obtain a current contract schedule and compare the current contract schedule to the contract schedule being reported upon by the auditor. Any variations should be discussed with management and assessed for revisions prior to the report being issued.

The requirements of AU-C section 540 will reveal a good bit about where contractors are in regard to their estimates made in obtaining the contract.

AU-C section 540 does a good job at assessing the quantitative factors when assessing the estimates. However, the qualitative aspects associated with the audit of accounting estimates are very important as well. The following are some other things the auditor may want to consider when auditing the contractor's estimates:

- Is the project in question similar to other projects completed by the contractor?
- Was there significant bid spread on the job?
- Is there much turnover in the estimating department?
- What level of involvement do project managers and superintendents have on the estimating process and reporting revised estimates to accounting?
- What is management's potential for override?
- What is the impact of local and national economic factors?
- What type of review is applied to the estimates?
- Are internal control policies and procedures in place and are they being implemented?

Confirmation of the Contract

In auditing, third party confirmation is considered one of the most reliable pieces of audit evidence one can obtain during an audit. The confirmation of contract details is considered just as important.

In preparing confirmations, the auditor may complete the contract details or leave the details blank. The manner in which the auditor wishes to confirm is a matter of professional judgment. However, by leaving the details blank, the auditor forces the recipient of the confirmation to properly research and complete the information requested. This technique lends a bit more assurance to confirmation process.

At a minimum the contractor confirmation should include

- original contract price;
- total approved change orders;
- total billings and payments;
- retentions held;
- details of any claims, back charges, or disputes;
- estimated completion date or estimated percentage complete; and
- provide space for any "other" comments the owner may want to express.

The confirmation of the contract details provides the auditor with the information necessary to complete a majority of the percentage of completion calculation.

The request to separate retentions is important. Retentions are subject to the contractor's completion to the owner's and contract's satisfaction. The amount of retention may be withheld for quite some time or may prove to be partially or fully uncollectible.

Practice Pointer

The auditor should consider assisting the contractor in completing the confirmations. The selection of contracts for confirmation should be done in conjunction with the assessment of risk at the individual contract level. The auditor's assistance in completing the confirmations can be done prior to year-end, as many contractors invoice prior to the end of the month (that is, the 20th of the month). Such assistance will prove to be an efficient approach in obtaining the necessary information for the audit of the contracts.

As with other engagements, the auditor will need to gather other audit evidence about the collectability of the receivables. The confirmation process provides only the evidence that the receivable exists. With a contractor it is important to consider not just the amount due from the customer, but also the amount of the contract price yet to be billed.

Reading of the Contract

In reading the contracts, the auditor should be looking for

- guarantees by the contractor including completion date;
- penalties and incentives including liquidated damages; and
- cancellation and postponement provisions.

In order to perform the most effective audit, the reading of the contract should include more than just the contract. The auditor should request not only the contract but all the files that relate to that particular contract. Other files may include, but are not limited to, the correspondence file, subcontractor file, "miscellaneous" files, and so on.

The auditor should review these files and document the significant terms and agreements (such as significant subcontractors) that are in place in order to complete the contract. In performing substantive procedures to other parts of the audit (contracts in progress, receivables, and subcontract payables), auditors should be able to cross-reference the items highlighted as part of their file review to the testing found elsewhere in the audit.

Workers' Compensation Issues

A significant portion of the contractor's cost performed on any contract is workers' compensation insurance. Contractors can pay premiums on workers' compensation in primarily two ways:

1. The contractor submits payroll on a monthly basis categorized by labor type with the corresponding premium based on contracted rates established at the beginning of the premium year.

2. The contractor is assessed a stated amount that is payable with a large, up-front premium followed by monthly installments over a short period of time (typically nine months).

The first method should provide the auditor more assurance than the second method. The auditor can review the payrolls submitted to the workers' compensation insurer and compare to the payroll reported in the accounting systems. As a follow up procedure, the auditor can review workers' compensation audits of earlier periods whereby the contractor filed under this method to determine any over- or underpayment of premiums.

The second method raises some concern. The second method could be a potential unrecorded liability and an understatement of job costs on the contract schedule. The auditor should review the policy and the premium basis by reviewing the contractor's workers' compensation wage base with the wages paid for the insured year. The contractor may have incurred more wages during the current year as a result of more contracts. If so, the impact on workers' compensation has not been recorded. For this method, the auditor should be aware of earlier audits and determine if a liability needs to be recorded and the impact that such a liability will have on job costs.

CONTRACTOR'S ACCOUNTING SYSTEMS

The contractor's accounting system is a very important function in the audit of a contractor. In evaluating a contractor's accounting system, the auditor should ensure that the following features are addressed by the accounting system:

- Adequate internal controls are in place or can be implemented and segregation of duties can be established.
- The system allows the coding of costs to the proper jobs.
- Profit and loss reports can be obtained on a per job basis both in a year-to-date and a job-to-date format.
- The system allows integration between estimating, bidding, and project management.
- The system has the ability to allocate properly indirect costs identified by management.
- The system has both general and application controls to prevent or at least minimize input error by the program user.

Practice Pointer

Many systems are available for contractors ranging from $300 to $300,000. The auditor is in the most opportune spot to assist in the design, selection, and implementation of a contractor's software. The important consideration that should be made when selecting a software package for a contractor is the program user.

Case in Point

Contractor A is starting his new construction company. In seeking advice, the accountant informed him of a great software package that the accountant had seen at a local trade show. The package contained numerous modules, which the contractor was advised that he needed. The software package was sold to Contractor A for $35,000. Two years later, the contractor threw the package in the garbage because of all the consulting and technical services that were required to run Contractor A's simple business that reported revenues of less than $2 million. The problem was not the software, but the user of the software.

FRAUD IN THE FINANCIAL STATEMENTS AND AT THE INDIVIDUAL CONTRACT LEVEL

If material fraud can occur in the financial statements of a contractor, it will more than likely occur at the individual contract. Most fraudulent financial reporting by contractors is found in the contract schedule. Also, the misappropriation of assets committed by employees in the accounting department is found recorded in the job cost accounts due to the volume of activity.

AU-C section 240, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*), makes a tremendous impact on our audit of the contractor. For more information on this see chapter 3.

Understanding the Use of the Financial Statements by Third Parties

The uncompleted contract schedule reported on by auditors is one of the most important tools the surety has in forming an opinion about the contractor. The opinion of the surety is very important, as it relates to the issuance of bonds to the contractor and for the amount of bonding capacity and bond program the surety permits.

In deriving this opinion, the surety relies on three basic premises commonly referred to as the 3 Cs:

1. Character – The surety takes into consideration the contractor's reputation with owners, employees, subcontractors, and other contractor competitors. It is considered a relationship of trust between the surety and the contractor.

2. Capacity – The surety evaluates the risk of the individual contract the contractors have entered. The surety will assess whether the contractor has the ability to handle a certain contract size, type of work, and certain locations.

3. Capital – Last but not least, the surety wants to know how well funded the contractor is to handle the uncompleted jobs listed. The surety is concerned if the contractor is stretched too thin to handle the next contract or if the contractor has sufficient working capital.

The auditor should be aware of the discussions the contractor has had with his or her surety or bond agent during the fiscal year under audit. The auditor should keep in mind that sureties more than likely know the historical data of the contractor as well or better than most auditors.

Auditors should be aware of the key ratios determined by the surety of their contractor. Certain ratios hold different levels of importance among different sureties. Auditors should have an understanding of what ratios their clients are being benchmarked against.

Practice Pointer

Sureties do not just judge contractors by their numbers; rather, they use the numbers to judge their character. And based upon their character, sureties make the decision to issue or continue the bonding relationship. Auditors can learn a lot from this contractor or surety relationship. The question is, will the CPA participate in full disclosure and be honest about contract performance or will the surety categorize the auditor in the same character classification as the surety does the contractor? The decision rests with the CPA.

Evaluating the Contractor as a Going Concern

It was once stated that the reporting of a contractor as a going concern is like giving the contractor the "kiss of death." A going concern label on any financial report is not a very encouraging sign for any financial statement user, but it is a very bad indicator for a contractor. So what should the auditor do?

The auditor should always evaluate any client, including contractors, the same. The auditor must look at the same indicators as that of any other industry…bad profit margins, losses for consecutive years, cash flows from operations, ability to meet debt servicing requirements, and so on.

In addition to looking at traditional trends, the auditor should also benchmark the contractor using various analytical procedures applicable to the construction industry. We discuss these analytical procedures and ratios on benchmarking in chapter 6. Using the construction industry's analytics will provide the auditor with better insight in determining how the rest of the industry is performing.

In addition to these ratios, another helpful approach is available for auditors of contractors. The contracts-in-progress schedule provides future insight for the auditor in evaluating the contractor's ability to continue as a going concern. This is very unique as compared to any other industry.

The auditor must determine the entity's break-even point by looking at the contractor's fixed overhead. From this, the auditor should determine the amount of pretax income the contractor will need to earn in order to break even. The sum of the fixed overhead and the pretax income is the gross profit the contractor will need to achieve in order to break even for the year in question.

The auditor then needs to look to the contracts-in-progress schedule. For the purpose of the going concern evaluation, the auditor should compare the gross profit margins to historical data that has been accumulated on the contractor's completed contracts. The auditor should use caution in assuming the gross profit reported is not inflated. This will provide the auditor with a conservative gross profit figure in determining break-even.

Based on this calculation the auditor can determine if fixed overhead for the upcoming year has been met by the backlog gross profit. If not, the auditor should obtain a plan from management on how it anticipates to reach this calculated and needed gross profit. If all appears reasonable, the auditor is satisfied in not issuing a going concern for his or her contractor client.

THE IMPLICATION OF DEFERRED TAXES

It is evident when you review chapters 10–13 that the income tax reporting for contractors is no small feat. Instead, due to the unique tax laws applicable to the contractor, the issue of deferred income taxes is very important.

Temporary differences are differences between financial and income tax reporting that have tax consequences. FASB ASC 740, *Income Taxes*, defines temporary differences as differences between the financial and tax bases of assets and liabilities that will result in future taxable or deductible amounts.

The most common types of temporary differences found in the construction industry are as follows:

- Depreciation and basis of assets – The MACRS depreciation lives for most construction equipment is five years with no salvage values. Add bonus depreciation and Sec 179 to this and you have significant deductions for tax purposes. In addition, due to the large tax deductions, equipment for book purposes typically carry salvage values and longer lives; thereby, increasing the reportable differences between book and tax reporting.

- Income recognition – As further discussed in the tax chapters, small contractors may report income from contracts in progress in a different manner than for tax purposes. For large contractors, they may use the 10 percent deferral method for tax purposes or different cost methods than used for book purposes. Whatever tax reporting method is used, it typically causes differences between book and tax reporting.
- Uninstalled materials – For book purposes, uninstalled materials must be included in inventory and cannot be charged to costs. For tax purposes, the uninstalled materials are charged to the jobs and accelerate revenue recognition.
- Accrued losses on jobs in progress – Loss contracts are required to be fully recognized as soon as the loss is known for book purposes, but under tax laws the loss is often delayed.
- Small tools – These costs may be written off for tax purposes but accounted as inventory for book purposes.
- Warranties and liabilities – Generally accepted accounting principles (GAAP) require a full and immediate recognition, whereas tax liabilities can only be deducted as paid in accordance with IRC Section 461. An example of an item that falls under this category is workers' compensation.
- Differences in computing percentage of completion – Note that GAAP percentage of completion can be determined by multiple input and output methods. For tax purposes, percentage of completion must be cost-to-cost for contracts over two years and large contractors.

The auditor must be aware which of the preceding items should be considered current and which items should be considered long-term. An error in classification has a significant impact on bonding, as the deferred taxes are included in working capital calculations.

For S corporations, partnerships, and sole proprietors, sureties encourage the disclosure of distributions anticipated to be made for personal tax liabilities incurred by the owners of construction entities of this type. This is a preference item requested by the sureties and not required by generally accepted accounting principles. However, it is suggested that you request how the surety handles this for your contractor client. The surety may assume a tax rate based on book income and accrue a liability for his or her purposes. In such instances, it may be wise to disclose anticipated withdrawals by owners for income tax purposes.

KNOWLEDGE CHECK

2. In the event a change order is not approved and costs are incurred by the contractor, what does the unapproved change order generally evolve into?

    a. A new contract.
    b. A claim.
    c. A back charge.
    d. A direct loss for the contractor.

3. What is the best method for auditing and reviewing the estimates used by contractors in calculating the percentage of completion formula?

    a. Develop an independent expectation.
    b. Review and test the process by which management determines its calculation.
    c. Perform substantive testing on the costs incurred to date.
    d. Review prior estimates.

4. In evaluating the contractor client as a going concern, what area may the auditor review to gain better insight?

    a. Receivables and unrecorded payables.
    b. Uncompleted contracts and backlog.
    c. The bonded jobs.
    d. Estimated new work.

Warning Signs for the Auditor

When auditing any audit client, the auditor should develop certain expectations regarding the tests the auditor is performing. When auditing a contractor's contract schedule the auditor should be aware of ratios or procedures that may be indicators of improper reporting or areas that should be commented on in a documented management letter or possibly as a reportable condition.

Some indicators that the auditor may want to consider include the following:

- Internal reporting
    - Job profit and loss reports furnished, at a minimum, on a monthly basis to management.
    - Collection and billing reports furnished on jobs on a weekly basis.
    - Cash requirement reports provided on a weekly basis prior to the releasing of disbursements to vendors.
- Estimating
    - Proper reviews performed prior to submitting bids.
    - The estimating process, policies, and procedures are well documented.
    - Quotes are obtained from more than one supplier or subcontractor, if possible.
- Job costing
    - A good system is used that allows for direct charges and necessary allocations to be made directly to jobs.
    - Reconciliations are performed routinely between the job cost ledger and the general ledger.
    - Burden allocations are reviewed and tested for accuracy.
    - Communication between the estimating, project management, and accounting is positive and open, with differences being resolved timely.
    - Job fade is tracked on each job and trends are investigated, followed by corrective actions, if necessary.
- Communication
    - Communication between project management and estimating is open to improve both processes throughout the company.
    - Communication between the surety, CPA, and other parties is forthright and honest.
    - Communication with suppliers and subcontractors is documented and positive relationships exist.
    - Contract files are organized and well documented regarding communication of any importance between the contractor and external parties concerning projects.
- Analytical procedures
    - The existence of large underbillings on any individual project should be investigated and documented. The presence of large underbillings is a sign that unapproved change orders exist and the work is being performed.
    - Numerous underbillings on contracts in progress: This could be a sign of poor estimating, poor billing procedures, or poor project management.
    - The presence of break-even or loss jobs on the uncompleted contracts schedule: The auditor should consider that the jobs are at a worst position being shown giving rise to unrecorded liabilities.
    - A continual trend of lower gross margins being reported at the time contracts are completed

- Frequent disputes or numerous unapproved change orders that remain unapproved and unpaid
- Significant bad debt expense: A sign that revenues are being recorded for unapproved change orders that never receive approval and are subsequently written off.
- Days in receivables are significantly higher than the industry averages. This could be a sign of recorded unapproved change orders recorded in receivables.
- The relationship between receivable retentions and payable retentions are significantly higher than industry averages. This could be a sign of unrecorded retentions payable to subcontractors.

Other analytical procedures discussed in the benchmarking chapter will identify abnormalities regarding the contractor. These analytical procedures should be used as part of preliminary and final analytical procedures by the auditor as part of the audit process. Variances from the benchmarks should be investigated and documented as to management's response or the audit procedures explaining the variances.

Applicability to a Review Engagement

Often the surety will request that the financial statements for smaller general contractors or for small- to mid-size subcontractors be subjected to a review. For larger entities it is very common that a CPA not only audit the entity's year-end financial statements, but also perform an interim review for the financial statements sureties on a semi-annual basis. In such cases, the interim review would typically be performed in accordance with AU-C section 930, *Interim Financial Information* (AICPA, *Professional Standards*).

Because of the common occurrence of review-level engagements, it is important that we consider what areas of risk a CPA should consider when looking at a contractor for a review-level engagement. In doing this, we should consider the 11 areas of concern mentioned in our areas of risk as it relates to an audit level engagement.

The AICPA has numerous resources for performing review-level engagements, including those requiring the application of Statements on Standards for Accounting and Review Services (SSARS) No. 21, *Statements on Standards for Accounting and Review Services: Clarification and Recodification*.

Summary

The risk of performing an audit engagement or a review-level engagement for a contractor can be significantly higher for the accountant who takes a balance sheet approach to the contractor's financial statements. The accountant must pursue a contract approach when applying the audit or review procedures to the contractor. By considering the top 11 areas of concern mentioned in this study, the accountant will achieve both an effective and efficient engagement.

Chapter 11

DEFERRED INCOME TAXES

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall the basic concepts regarding permanent and temporary differences and their application to the construction industry as prescribed by Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 740, *Income Taxes*.
- Identify specific items for construction contractors that may cause temporary or permanent differences.

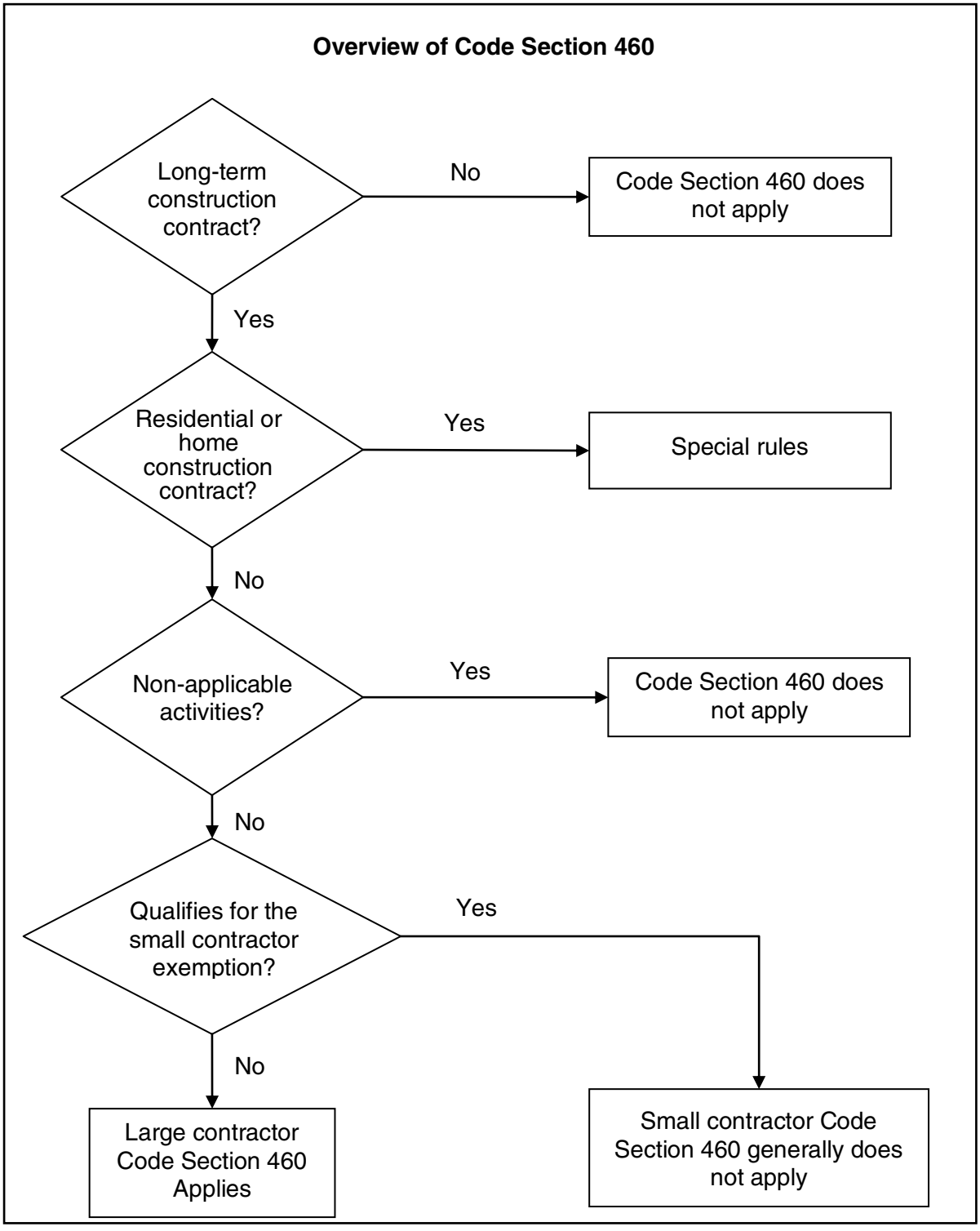
On May 28, 2014, FASB and the IASB issued a joint ASU, No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* on revenue recognition to address a number of concerns regarding the complexity and lack of consistency surrounding the accounting for revenue transactions. This new revenue recognition guidance will have an immediate effect on construction contractors and contract accounting once implemented. The tax effect of FASB ASU No. 2014-09 will vary from business to business.

A more detailed overview of this change to the accounting for construction contracts and contractors will be provided in future revisions of this course. Refer to the appendix of this course for an overview of the requirements of ASU No. 2014-09.

INTRODUCTION

Significant differences exist between generally accepted accounting principles and Code Section 460 of the Internal Revenue Code. A detailed explanation of these differences is covered in the prequel to this course, "Construction Contractors: Accounting, Auditing and Tax," provided by the AICPA. Based on these differences, especially in accounting for revenue, it is extremely important that we delve into the matters dealing with FASB ASC 740 and the impact of the differences between generally accepted accounting principles (GAAP) and income tax methods of accounting.

The application of FASB ASC 740 is primarily balance sheet-focused on calculating deferred tax assets and liabilities with the change effecting a company's income tax expense or benefit. Such tax effects are based on the enacted tax rate expected to apply to taxable income in the periods in which "temporary" differences are expected to reverse.



Permanent and Temporary Differences

In determining the tax effects between GAAP and income tax methods of accounting, FASB ASC 740 defines permanent differences and temporary differences.

Permanent differences are those differences between GAAP and income tax that will never be recognized. They are the irreversible differences that we see each year. These differences will not be recorded on the company's tax return. Various examples of such permanent differences are, but not limited to: tax exempt interest, 50 percent of meals and entertainment, officers' life insurance premiums, penalties, and so on.

Temporary differences are those differences between GAAP and income tax reporting that require recognition via the deferred income tax accounts reflected on the balance sheet. These differences will eventually be recognized on the company's financial statements or income tax returns within the next reporting period or the differences may spread over several reporting periods. Depending on the timing of the temporary difference reversal, the temporary difference is classified as short-term or long-term.

Application to the Construction Industry

Due to the uniqueness of the construction industry there are several temporary differences that must be taken into consideration. For our purposes, we will focus on the following temporary differences:

- Differences between the percentage of completion method and other methods used for income tax reporting
- Differences between GAAP and tax with the recognition of income for "contract-related" services
- Differences in computing percentage of calculation
- Differences in depreciation methods
- Differences due to the provision for losses on uncompleted contracts
- Differences arising from joint ventures

Differences Between the Percentage of Completion Method and Other Methods Used for Income Tax Reporting

With the exception of the differences generated by depreciation, the impact of the different revenue recognition methods could be one of the largest contributors to a contractors' determination of the impact of FASB ASC 740. This is largely seen when considering contractors whose contracts fall under the small contractor exemption; however, large contractors could see an impact as well. The following revenue recognition methods must be considered when determining the impact of various revenue recognition methods:

- Completed contract – The completed contract method for income tax reporting will see the deferral of income from the gross profit of contracts in progress at year end. For tax purposes, the deferral of the gross profit on these contracts is deferred until the contract meets the IRS definition of complete. Until they meet the definition of completion, the gross profit is deferred into the next period.
- Accrual method – The contributing factor giving rise between the accrual method for tax purposes and the percentage of completion for financial purposes is the recognition of under- and overbillings on the balance sheet. These balance sheet accounts give rise to a temporary difference for GAAP purposes.

- Accrual excluding retentions method – This method takes into account the same contributing factors as the accrual method. In addition to the factors of the accrual method, the company must recognize as a temporary difference the deferral of retention receivable and retention payable on contracts that are in progress.
- Cash method – Under the cash method, the temporary differences are numerous when taking a company from accrual to cash conversion. Not only must one consider the standard reversals of receivables, prepaid expenses, payables, accrued expenses, but also the impact of those balance sheet items recognized on the contract schedule. The impact of the accrual to cash conversion makes up the temporary difference for GAAP purposes.
- Percentage of completion-simplified cost – This method is available for contractors required to file under the percentage of completion method. The simplified cost method takes into consideration only certain job cost items creating a difference between financial and tax income. Recognition of only certain costs can generate different percentages of completion, causing more or less revenue to be recognized for income tax purposes creating a temporary difference for GAAP purposes.
- Percentage of completion, exclusion of jobs less than 10 percent complete – This method is available for contractors required to file under the percentage of completion method. Jobs less than 10 percent complete are excluded for tax purposes but will be reported for financial purposes creating a temporary difference with the gross profit on those jobs that are less than 10 percent complete.

Differences Between GAAP and Tax with the Recognition of Income for "Contract-related" Services

Code Section 460 indicates four contract-related services that are deemed *non-applicable* activities. These activities per the tax code are to be recognized under the taxpayer's normal method of accounting. However, GAAP permits such contract-related services to be reported using long-term contract methods.

Differences in Calculation of Percentage of Completion

The formula for calculating the percentage of completion has a slight difference in presentation but for the most part the formula remains the same. The issues that surface when recognizing what gives rise to deferred income tax differences regard the components that make up the formula for calculating percentage of completion.

For financial accounting purposes, the percentage of completion may be calculated using the cost-to-cost method, efforts expended, or any other method that provides the contractor with a reasonable basis for determining the percentage of completion for the contract. However, for tax purposes, the percentage of completion must use the cost-to-cost method. For tax purposes, the taxpayer may also want to use the simplified cost-to-cost method in determining the percentage of completion formula. This method takes the following costs into consideration in the numerator and denominator when calculating the percentage of completion:

- Direct labor (including labor burden)
- Direct materials (including subcontractors)
- Depreciation on equipment used on the contract

Differences in Depreciation Methods

A significant impact to the differences between financial and taxable income will be seen in the depreciation of construction equipment. Implementing Section 179 or other special depreciation allowances, such as bonus depreciation or GoZone depreciation, would reflect large differences in the year of acquisition of construction equipment purchased by the contractor. In addition to the special allowances, most construction equipment is depreciated over five years for tax purposes; however, based on the care provided by contractors on their equipment, the useful lives of the construction equipment can be closer to 10 years for financial purposes. Also, contractors can typically estimate salvage values of their equipment that will cause differences when computing tax depreciation.

Differences Due to the Provision for Losses on Uncompleted Contracts

For financial purposes, GAAP requires that a loss must be accrued to recognize the entire loss on the contract regardless of the percent complete. For tax purposes these losses are not deductible.

Differences Arising From Joint Ventures

The use of joint ventures by contractors has become a popular vehicle for contractors to combine their bonding capacities with other contractors and perform larger contracts than they could if they acted individually. Based on this, certain rules between financial and tax could give rise to additional temporary differences.

Knowledge Check

1. The differences which reverse, in reporting for GAAP purposes and income tax purposes, for a contractor are considered what for deferred income taxes?

    a. Permanent differences.
    b. Reportable conditions.
    c. Temporary differences.
    d. There are no differences.

2. Which is not considered a temporary difference when accounting for a contractor?

    a. OSHA penalty regarding labor issues.
    b. Losses on uncompleted contracts.
    c. The 10 percent deferral method.
    d. Accelerated depreciation.

The Use of Enacted Tax Rates

Under FASB ASC 740, deferred taxes are calculated using the enacted tax rates that are expected to be in effect when temporary differences reverse and the amounts are reported for tax purposes. FASB ASC 740 requires corporations to measure deferred taxes using the maximum effective rate (currently 35 percent even though the highest bracket is 38 percent) unless the effect of the graduated rate structure is significant.

When determining the tax rate to be applied to temporary differences, enacted future changes should be considered. However, any other rate changes, regardless of the probability of enactment, should not be considered.

CALCULATING THE DEFERRED TAX PROVISION

As mentioned previously, the deferred tax expense provision is the difference between the deferred tax asset and liability accounts determined at the beginning and end of the contractor's fiscal year. The calculation should proceed as follows:

1. Determine the types and cumulative amounts of temporary differences and the amount and expiration date of each operating loss and tax credit carryforward at the balance sheet date.
2. Compute the total deferred tax liability for the total taxable temporary differences using the tax rate expected to be in effect when the differences reverse.
3. Compute the total deferred tax asset for the total deductible temporary differences and operating loss carryforwards using the tax rate expected to be in effect when the differences reverse.
4. Determine the deferred tax assets for each type of tax credit carryforward, including AMT carryforwards.
5. Reduce deferred tax assets by a valuation allowance.

VALUATION ALLOWANCE

Net deferred tax assets must be reduced by a valuation allowance, when based on the available evidence it is more likely than not that any portion or all of the net deferred tax assets will not be realized.

A final determination of the amount of an allowance should be based on all allowable evidence including, but not limited to, the following:

- Current financial position
- Results of operation for the current and prior years
- Future reversals of existing temporary differences
- Expected future taxable income
- Taxable income in carryback years
- Tax planning strategies that could be implemented to accelerate taxable income to use loss carryforwards, change ordinary income (loss) to capital gain (loss), and so on

It may be difficult for one to deny that a valuation allowance is not necessary if the following exists:

- Losses in recent years
- History of expired tax benefits
- Expected future losses
- Expectation of loss contingencies that would have a negative impact on operations

For contractors, some evidence that allows us to look into the next fiscal year is available to minimize the fact that we should calculate a valuation allowance. This evidence includes the following:

- The backlog of contracts that provide evidence that there will be sufficient evidence that will assure realization of the deferred tax asset
- Unrealized profits that may occur from the sale of equipment
- Other extraordinary items may occur

Accounting for Uncertainty in Income Taxes Under FASB ASC 740

The evaluation of a tax position in accordance with FASB ASC 740 is a two-step process. The first step is recognition: The enterprise determines whether it is more likely than not that a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. In evaluating whether a tax position has met the more-likely-than-not recognition threshold, the enterprise should presume that the position would be examined by the appropriate taxing authority that would have full knowledge of all relevant information. The second step is measurement: A tax position that meets the more-likely-than-not recognition threshold is measured to determine the amount of benefit to recognize in the financial statements. The tax position is measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement.

Differences between tax positions taken in a tax return and amounts recognized in the financial statements will generally result in one of the following:

a. An increase in a liability for income taxes payable or a reduction of an income tax refund receivable
b. A reduction in a deferred tax asset or an increase in a deferred tax liability
c. Both (*a*) and (*b*)

An enterprise that presents a classified statement of financial position should classify a liability for unrecognized tax benefits as current to the extent that the enterprise anticipates making a payment within one year or the operating cycle, if longer. An income tax liability should not be classified as a deferred tax liability unless it results from a taxable temporary difference (that is, a difference between the tax basis of an asset or a liability as calculated using this interpretation and its reported amount in the statement of financial position). This interpretation does not change the classification requirements for deferred taxes.

Tax positions that previously failed to meet the more-likely-than-not recognition threshold should be recognized in the first subsequent financial reporting period in which that threshold is met. Previously recognized tax positions that no longer meet the more-likely-than-not recognition threshold should be derecognized in the first subsequent financial reporting period in which that threshold is no longer met. Use of a valuation allowance as described in Statement 109 is not an appropriate substitute for the derecognition of a tax position. The requirement to assess the need for a valuation allowance for deferred tax assets based on the sufficiency of future taxable income is unchanged by this interpretation.

Summary

It is imperative that any accountant servicing the construction industry have a thorough understanding of both generally accepted accounting principles and the Internal Revenue Code as it applies to contractors. The financial impact from a GAAP and income tax perspective can be significant and the practitioner must be aware of such an impact.

Chapter 12

ALTERNATIVE MINIMUM TAX CONSIDERATIONS FOR CONTRACTORS

Construction Contractors Advanced Issues
By Dale Ruther

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall the circumstances under which an exemption from the alternative minimum tax exists.
- Recall the specific construction-related tax items to consider when performing the calculation of the alternative minimum tax.
- Identify strategies for construction contractors to minimize the alternative minimum tax.

INTRODUCTION

A man once said, "Alternative Minimum Tax does not apply if you don't file the form!" Hopefully, the man was only kidding, but many tax professionals allow the alternative minimum tax (AMT) adjustment to sneak up on them. For contractors, the impact of the AMT can be significant, and the adviser must be aware of the impact that it can bring.

For small contractor taxation, two adjustments have a significant impact on whether or not the small contractor is subject to the AMT: the long-term contract and the depreciation adjustments. The impact of AMT implications may provide the adviser to the small contractor different options when tax planning and making entity selection.

Exemptions from AMT

Two exemptions are available for contractors when faced with the AMT.

1. Home construction contracts
2. "Small corporations" as defined by IRC Section 55(e) enacted in the 1997 tax legislation

HOME CONSTRUCTION CONTRACTS

The tax law specifically exempts construction contracts from the AMT provisions that meet the definition of "home construction contracts." A "home construction contract" is one in which 80 percent or more of the estimated total contract costs are reasonably expected to be attributable to the building, construction, reconstruction, or rehabilitation of

- dwelling units contained in buildings containing four or fewer dwelling units, (each townhouse or row house is treated as a separate building); and
- improvements to real property directly related to such dwelling units and located on the site of such dwelling units.

As part of the 80 percent test, the costs of off-site work (roads, sewers, and so on) are treated as attributable to the construction of the house.[1]

Home construction contracts include contracts performed by many subcontractors that one does not identify as a "homebuilder." Contractors such as HVAC, plumbing, roofing, concrete, and even dirt contractors may be performing services that meet the definition of home construction contracts.

Practice Pointer

It is very important that one understand the tax definition of a home in taking advantage of this exemption. It is simple to identify a single-family home as meeting the tax definition. Also, simply explained would be any unit containing four units in a building. In considering townhouses or row houses, they will qualify as well on the condition that no more than four units or apartments are contained in the unit.

[1] See Q&A # 44 of IRS Notice 89-15.

"SMALL CORPORATIONS" EXCEPTION

For tax years beginning after December 31, 1997, small C corporations are now exempt from AMT based on their average gross receipts. The following conditions are necessary in order for the corporation to qualify as a "small corporation":

- The corporation must be a C corporation.
- The C corporation's gross receipts for the prior three years must not exceed $5,000,000 for the first tax year beginning after December 31, 1996.

If these conditions are met, the corporation is eligible for the small contractor exemption. The gross receipts are averaged over a three-year period ending the year before the exemption is to be claimed. If the corporation is not in existence for the entire three-year period, the average gross receipts are based on the time the corporation existed. If a corporation has a short year, gross receipts must be annualized. The threshold increases to $7,500,000 after the first three-year period. However, the corporation will never qualify for the AMT exemption once it exceeds the $7,500,000 threshold, even if gross receipts subsequently recede to less than the $7,500,000 limit.

Case in Point

Contractor A has the following gross receipts:

Tax Year	Gross Receipts	Average Gross Receipts
1994	$ 2,000,000	$ —
1995	4,000,000	1,000,000
1996	4,000,000	3,000,000
1997	5,250,000	3,333,333
1998	6,500,000	4,416,667
1999	12,000,000	5,250,000
2000	6,000,000	7,916,667
2001	4,000,000	8,166,667
2002	9,000,000	7,333,333

In 1999, even though the gross receipts exceed $7,500,000, the corporation's preceding three-year average remains less than the $7,500,000 limit. In 2000, the corporation exceeds the $7,500,000 limit and contracts entered during 2000 are subject to the AMT. In 2002, the corporation's prior three-year average falls to less than $7,500,000. However, the company has lost its ability to receive an exemption and must remain subject to the AMT.

Gross Receipts Defined

Gross receipts are defined as total sales (less returns and allowances), plus investment income (including OID and tax exempt income), and reduced by adjusted basis of capital assets and Section 1231 assets sold.

A corporation may fail the gross receipts tests if is grouped with related corporations as a single employer as defined in Section 448(c)(2), or if the corporation is grouped with a predecessor corporation as defined in Section 448(c)(3)(D).

KNOWLEDGE CHECK

1. Contractors who employ the methods available to them under the small contractor exemption must be aware of which when reporting taxable income?

    a. AMT issues.
    b. Risk of IRS examination issues.
    c. Bonus depreciation issues.
    d. Special rules for dues and subscriptions.

LONG-TERM CONTRACT ADJUSTMENT

The long-term contract adjustment is computed by taking the income recognized by the percentage of completion method and comparing to the income reported using the taxpayer regular tax method. The difference could result in a positive or a negative adjustment in determining the taxpayer's alternative minimum taxable income (AMTI).

For purposes of the AMT, the revenues and costs from long-term contracts must be reported under the rules of the percentage of completion method. Section 460(b) must be followed in reporting long-term contracts replacing any method the contractor follows in reporting under their regular tax calculation. The implications that will occur are as follows:

- The percent complete must be determined by using the cost-to-cost method. The contractor must compare costs incurred to date to total estimated costs. The use of any other method (that is, labor hours) permitted by generally accepted accounting principles in determining the percent complete is not acceptable.
- Costs for all long-term contracts are defined by Section 460(c) and by reference Treasury Regulation 1.451-3(d)(6) costing applying only to extended-period long-term contracts.
- The look-back rules under Section 460(b)(2)(B) are triggered and must be applied to the previous year.

Using the Simplified Cost Method

In calculating the percentage of completion, the taxpayer is permitted to use the simplified costing method to determine the percent complete for contracts. Simply put, the simplified method takes into consideration the following costs in determining costs incurred to date and estimated costs to complete

- direct labor, including subcontractors and payroll taxes;
- direct materials; and
- depreciation, amortization, and cost recovery allowances on equipment and facilities used directly on the contract.

Practice Pointer

Implementation of the simplified cost method is not as simple as it seems. The job cost systems of contractors are much more complicated than capturing the three components of the simplified cost method. Many job cost systems have a variety of labor and equipment burden allocations that are not allowed in determining the simplified cost method. Also, estimators do not provide estimates in determining estimated costs to complete based on the three components of the simplified cost method. Because of these limitations, few contractors follow this method.

Depreciation Adjustment

Accelerated depreciation (MACRS) on real and personal property placed in service after 1986 must be separately calculated for AMT purposes under the alternative-depreciation system (ADS) of Section 168(g). The difference between the MACRS and ADS depreciation must be adjusted in reflecting AMTI under Section 56(a)(1).

The significant difference between the MACRS and ADS depreciation is found in the lower depreciation rates and longer useful lives of ADS depreciation. In early years, the ADS depreciation is lower than MACRS, which results in a positive adjustment to a taxpayer's AMTI. Such an adjustment will reverse over time or upon disposition of the depreciable property.

In most cases, the ADS uses the 150 percent declining balance. Section 56(a)(1)(A)(ii) allows us to switch to straight-line at a point when the straight-line deduction is greater. The taxpayer is limited on this accelerated method if the taxpayer elects the straight-line method for MACRS. In this case the straight-line method must be used for AMT purposes instead of the 150 percent declining balance.

For property placed in service after 1998, AMT depreciation adjustments are based on the regular MACRS recovery period rather than on the longer ADS recovery period. The AMT method is still limited to use the 150 percent declining balance over the regular MACRS recovery period.

Past tax legislation has offered bonus depreciation of 30 percent and 50 percent on newly purchased assets with lives less than 15 years. Assets that elect to receive the bonus depreciation are not subject to any AMT depreciation adjustment. This election expired December 31, 2004 with the exception of Hurricane Katrina and Rita legislation. The Protecting Americans from Tax Hikes Act of 2015 (PATH Act) extended 50 percent bonus depreciation through 2019. Thus bonus depreciation or disposal of such assets have an impact on the AMT depreciation adjustment.

Minimizing the Minimum Tax

The best way to minimize the effect of the AMT is to reduce the percent complete reported on jobs in progress. The more the job is complete the more gross profit the percentage of completion method will recognize. Several techniques exist that taxpayers can use in minimizing their AMT including the following:

- Evaluate the usage of materials on jobs in progress.
- Control subcontractor front loading.
- Explore the usage of the simplified cost method.
- Exercise the all-events test and economic performance.
- Reevaluate the estimated costs to complete.

These strategies are explained in more detail in subsequent paragraphs.

Evaluate the Usage of Material on Jobs in Progress

The accounting treatments for uninstalled materials on construction jobs are very different between generally accepted accounting principles and the tax law. Generally accepted accounting principles requires you to capitalize uninstalled materials that have been dedicated to the project as inventory.

The tax law requires that these uninstalled materials are to be included in the costs incurred to date. Under the percentage of completion formula, such inclusion of the uninstalled materials as costs incurred recognizes more income for the taxpayer. This is a harsh tax treatment that may cause dollars and profits to be taxable before they are earned or become billable.

The focus of this issue is uninstalled materials; therefore, the objective would be for the contractor to avoid having uninstalled materials on the job site. As part of the tax adviser's planning tools, the professional should be stressing to the contractor to minimize material shipments prior to year-end.

Many times this problem occurs more from the suppliers' end of inventory management. Many suppliers are trying to move materials prior to the suppliers' year-end for their tax situations as well. If this were the case, the contractor may want to buy in bulk, but not charge the materials to a particular job. Instead, the contractor should inventory the stock and requisition the materials, as they are needed.

Control Subcontractor Front Loading

The impact of material vendors as previously discussed and subcontractors' billings affect a general contractor in very similar ways. Invoices billed to the contractor are included in costs incurred for that project, thereby recognizing the revenue through the percentage of completion formula. The control the general contractor must put into place is over the performance of the subcontractor.

Every contractor attempts to "front load" every contract they are awarded. Whether or not they are paid for their "front loading" efforts depends on the subcontractor management. To minimize the impact of revenue recognition for tax purposes, the contractor must "true up" the subcontractor's billings to the work performed. By disallowing certain completion percentages being billed by the subcontractor, the general contractor lowers the costs incurred and in turn reports less revenues earned on projects in progress.

Explore the Usage of the Simplified Cost Method

As mentioned previously, the implementation of the simplified cost method is not all that simple. However, it is a method that affects both the numerator and denominator in determining percentage of completion.

Usage of the simplified cost method is best used in the event the contractor has substantial indirect costs on the job. These costs may be incurred in the early stages of the contract at a time when the inflow of cash may not be as great. Due to the fact that indirect costs are not factored into the simplified cost method, the percentage of completion is minimized.

Exercise the All-Events Test and Economic Performance

As a more aggressive approach, one might consider arguing the treatment of retentions and materials under the all-events test and economic performance. For retentions, the contractor may consider reducing the treatment of retentions payable from costs incurred. The contractor's position would be that the retentions cannot be included because all the events have not occurred to fix the liability and the amount is not determinable. This position is supported with Revenue Ruling 69-314, 1969 C.B. 139 and in *Shepherd Construction Co. v Commissioner*, 51 T.C. 890.

The taxpayer may elect to treat economic performance for materials as being provided when the property is "accepted" under Treas. Reg. 1.461-4(d)(6)(iii). The key to upholding this position is for the contractor to take a reasonable position as to the time that acceptance of materials occurs with respect to an unpaid invoice. For example, it is unreasonable in most circumstances for the taxpayer to contend that acceptance of materials does not occur until the job is completed and accepted.

Reevaluate the Estimated Costs to Complete

The final strategy is one that may be the easiest to implement. The costs estimated to complete a contract have a direct effect in determining the percent complete. However, the contractor does not typically estimate the costs to complete as defined by the tax code.

Because the costs allocated for AMT purposes are considered extended-period costs, the contractor will find that a substantial amount of its general and administrative expenses as defined by indirect costs must be allocated to the contracts. Therefore, if the indirect costs must be included in the costs incurred, one must add the estimated indirect costs to the estimated costs to complete. In most cases, this will result in a higher estimated cost to complete and in turn lower the project's percent complete.

KNOWLEDGE CHECK

2. In evaluating the different techniques in lowering the AMT for a contractor, what may the accountant want to suggest to the contractor?

    a. Convert to the percentage of completion method.
    b. Control subcontractor front loading.
    c. Change depreciation methods.
    d. Accelerate income recognition.

3. By excluding retainage receivable and retainage payable from the contracts in progress, the contractor meets which test in minimizing AMT?

    a. Simplified cost.
    b. All-events and economic performance.
    c. 10 percent deferral method.
    d. The FIFO test.

Summary

The AMT is something practitioners as well as taxpayers do not like to think about. In the construction arena, we find significant adjustments through long-term contract and depreciation adjustments that can very easily trigger the AMT for our clients. We must consider the impact of AMT in the planning for our clients.

Chapter 13

LOOK-BACK METHOD

LEARNING OBJECTIVES

After completing this chapter, you should be able to do the following:

- Recall the overall purpose the of look-back issues for construction contractors.
- Identify the details of calculating the look-back amount, including specific steps and amounts to be included and excluded.

INTRODUCTION

In calculating the revenues and gross profits under the percentage of completion method (PCM), we noted that the most significant part of the formula is the term "estimated." The use of estimates in determining income is not only a concern when preparing financial statements for a contractor but also in determining taxable income for the contractor. The use of estimates by contractors in determining profitability on jobs that are in progress can vary significantly from how the job actually finishes. As a result, the IRS introduced a calculation required on contractors' tax returns to combat these significant variations from not only the over-reporting of income on tax returns, but primarily the underreporting of income as a result of using estimates.

The calculation the IRS introduced is referred to as the look-back calculation. The look-back calculation must be applied to all long term contracts reported under the percentage of completion for not only regular income tax but also for contracts that meet reporting requirements under the alternative minimum tax (AMT) regulations.

Two types of contracts are exempt from the look-back calculation:

1. Those contracts that meet the small contract rule of IRC Section 460(b)(3)(B); *or*
2. Those contracts that meet the *de minimis* exception of Section 460(b)(6).

Unfortunately for contractors, nearly all contractors are potentially subject to the look-back calculation. Practitioners in the construction industry have been pleading with the IRS to repeal the look-back calculation due to the time and complexity of the calculation. Many times the efforts expended in making such a calculation produce a minimum return for either of the parties involved in the estimating variation. Nonetheless, the IRS continues to resist any change or repeal of the look-back calculation. To the IRS, the application of the look-back method keeps the contractors honest in reporting of estimates when determining taxable income.

Reporting the Calculation

The Section 460 Regulations define the scope of the look-back issues:

> The look-back method applies to any income from a long-term contract within the meaning of Section 460(f) that is required to be reported under the percentage of completion method (as modified by Section 460) for regular income tax purposes or for AMT purposes. If a taxpayer uses the PCM for long-term contracts, the look-back method applies for regular tax purposes only to the portion (40, 70, or 90 percent, whichever applies) of the income from the contract that is reported under the percentage of completion method. To the extent that the percentage of completion method is required to be used under Treasury Regulation (Treas. Reg.) 1.460-1(g) with respect to income and expenses that are attributable to activities that benefit a related party's long-term contract, the look-back method also applies to these amounts, even if those activities are not performed under a contract entered into directly by the taxpayer.

The look-back method requires the taxpayer to review the under- or over-reporting of differences resulting from jobs not completed across taxable years. Once the contractor has determined the inherent difference of the under- or over-reported income, the taxpayer must determine the tax liability the taxpayer would have incurred if the estimates would have been 100 percent accurate. Such a calculation may result in an overpayment by the taxpayer and result in a refund from inaccurate estimates.

Once the potential tax liability or refund is determined, the taxpayer must then determine the interest that would be due or receivable on the tax. Such information is filed on the IRS form number 8697. This form is due at the same time as the taxpayers' income tax return.

EXCEPTIONS TO THE CALCULATION

As stated earlier, the *look-back* does not apply to two types of contracts under the small contract exception rules of IRC 460(b)(3)(B). These contracts are either

1. A home construction contract within the meaning of Section 460(e)(1)(A); *or*
2. If the contract does not meet the definition of the home construction contract, then one must look to see if the taxpayer meets the small contractor exemption. If the contract is estimated to be completed within a 2-year period and the contractor's average annual gross receipts for the 3 tax years preceding the tax year, the contract is entered into do not exceed $10,000,000 (as provided in Section 460(e)(1)(B)). These contracts are not subject to the look-back method for *regular* tax purposes unless the contractor has properly elected and changed its method of accounting for these contracts to the Section 460 PCM. The look-back method, however, applies to the alternative minimum taxable income (AMTI) from a contract of this type.

If the contract and the contractor do not meet the previously mentioned exception, there is still another exemption to the look-back calculation referred to as the de minimis exception. Under the de minimis exception the contracts do not require *look-back* if the gross price of the contract does not exceed $1,000,000; or 1 percent of the average annual gross receipts of the taxpayer for the three taxable years preceding the taxable year in which the contract was completed.

Small contractors using the PCM should not presume that they have no exposure to look-back calculation, but such a situation would be relatively rare. A measure of relief is contained in Section 55(e), which provides an exemption for small corporations. A small corporation is initially one whose average annual gross receipts for the first three tax years beginning after December 31, 1993, are $5,000,000 or less.

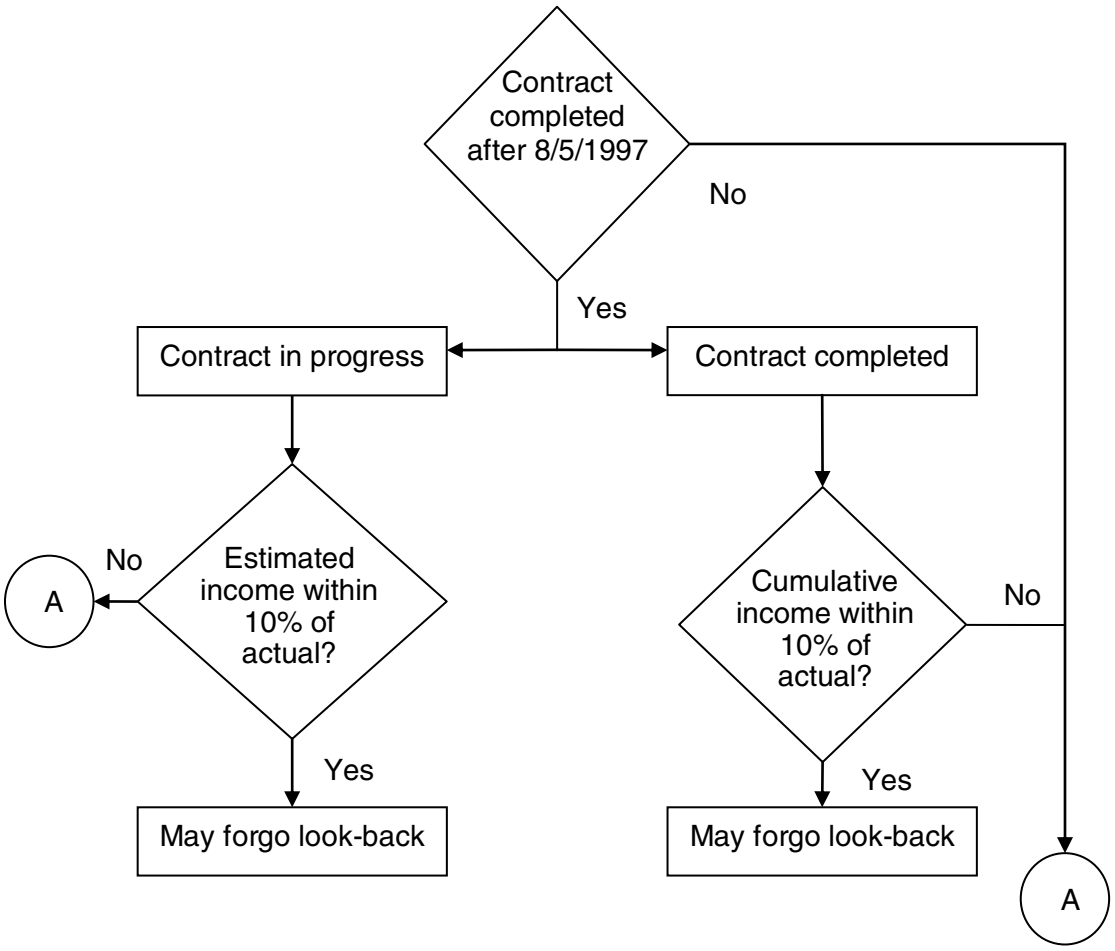
Treas. Reg. 1.460-6(c)(3)(vi) requires the AMT to be taken into account in making the look-back interest calculation. For example, if a taxpayer would have been liable for AMT during a construction year if actual rather than estimated contract prices and costs had been used in determining contract income for the year, the overpayment or underpayment of tax on which the look-back interest is calculated would include the AMT liability whether the taxpayer was liable for AMT or not.

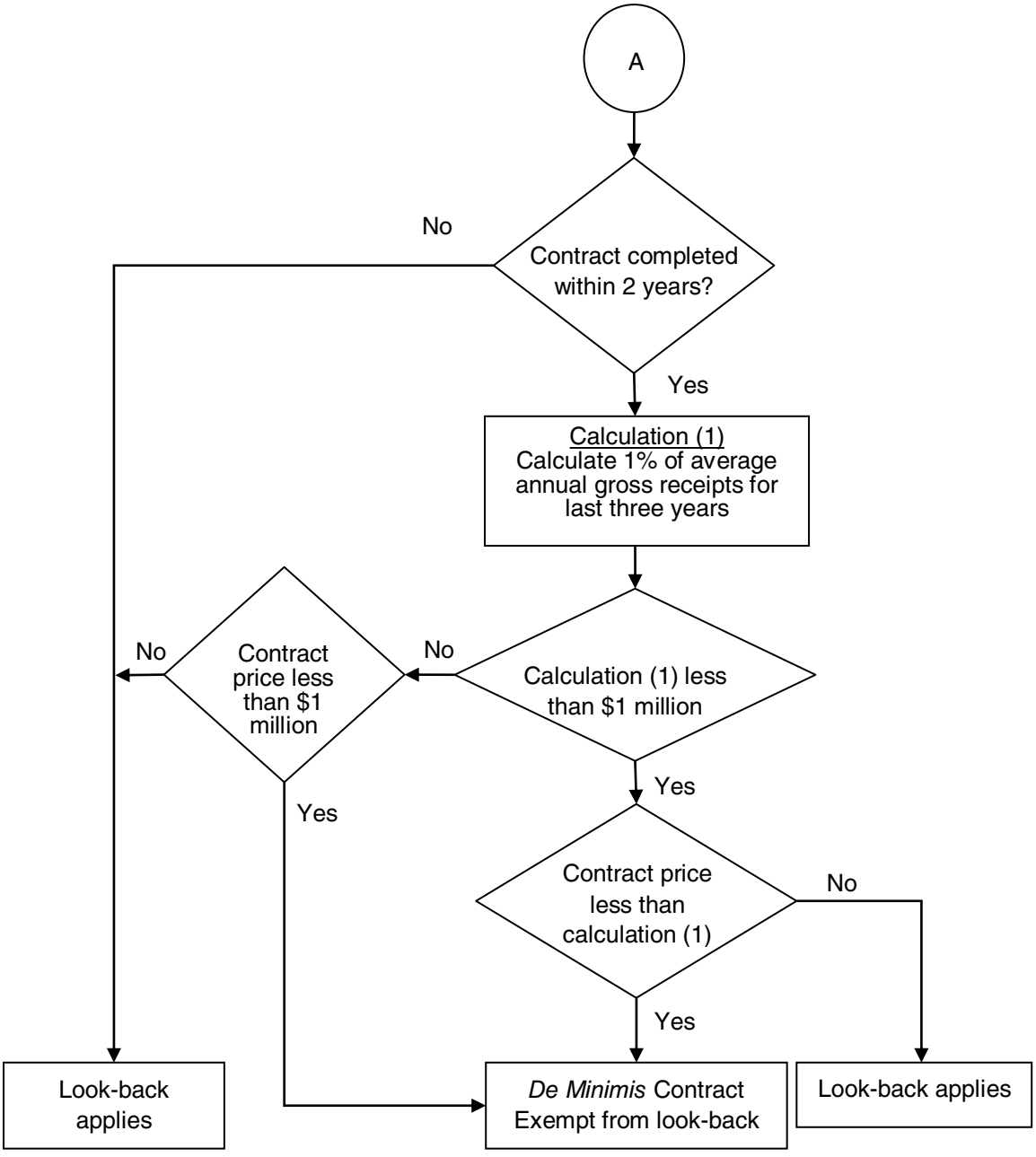
Whether the contractor is subject to the regular tax or the AMT, the *de minimis* exception still applies to both.

THE DE MINIMIS ELECTION

In addition to the *de minimis* exception, Section 460(b)(6) provides the contractor with a *de minimis* election. The *de minimis* election allows the contractor to exclude any contract where the cumulative taxable income generated from the individual contract is within 10 percent of the cumulative look-back income for each prior year in which the look-back is determined.

The following flowchart should assist you in determining if look-back applies to your situation:





To understand the impact of the *de minimis* election look at the following example:

Example 13-1

	Regular Year 1	Regular Year 2	Completion Year 3	Look-Back Year 1	Look-Back Year 2
Contract	$ 1,000	$ 1,100	$ 1,533	$ 1,533	$ 1,533
Est Costs	800	1,000	1,200	1,200	1,200
Est Gross Pft	200	100	333	333	333
Cost to Date	72	800	1,200	72	800
% Complete	9%	80%	100%	6%	67%
Cum. Profit	18	80	300	20	222
Look-Back Adj.				2	142

In the preceding example, this contract would have failed to meet the *de minimis* election. The look-back adjustment on year one meets the *de minimis* election because the $2 difference is 10 percent of the cumulative look-back profit. However, the look-back adjustment on year two is what causes the contract to fail the *de minimis* election. Had the regular cumulative profit for year two been in the range of $200 to $244 (10 percent greater or less than the look-back cumulative profit) the contract would have met the *de minimis* election and not be subject to look-back.

The *de minimis* election is automatic and must be made with an affirmative statement on the return. An example of the statement follows:

> **Phantom Construction, Inc.**
> **December 31, 2006** **EIN: 12-3456789**
>
> **NOTIFICATION OF ELECTION UNDER IRC SECTION 460(b)(6)**
>
> **Phantom Construction, Inc., elects not to apply look-back in *de minimis* cases effective for the taxable year beginning January 1, 2006 with respect to its general contract trade of business under Section 460(b)(6).**

Note that the preceding statement is affirmative in nature and that you must indicate the trade or business you are in.

Although the *de minimis* election is a wise choice for contractors to make, the election is not for every contractor. The election may want to be considered for contractors who are conservative on their contracts at year-end. These contractors will typically have gains on their contracts from year to year. By electing the *de minimis* election, you will be able to avoid the look-back on the qualifying contracts and avoid being subject to interest on the taxes due.

One must use caution with this election. In the situation where a contractor client will overstate their estimates and typically see a lower profit margin at contract completion instead of a gain, the election will eliminate their ability to receive a refund on those contracts.

As noted earlier, the election to apply the *de minimis* election is automatic by submitting the election in the affirmative statement, termination is not as easy. In order to terminate the *de minimis* election, the contractor cannot do so without approval of the Commissioner.

LOOK-BACK? WHAT IS LOOK-BACK?

Look-back is one of those issues that has become a hot item to the IRS in recent years. One of the new chapters added to the IRS's *Construction Industry Audit Technique Guide* informs the examiner of the importance of look-back and what to look for during examinations.

In August 2004, the IRS formed a look-back emerging issue team to address the numerous problems encountered in complying with the look-back calculation. Based on their research they determined that 71 percent of the population were not filing look-back at all. In addition to the overwhelming noncompliance with look-back, of the 29 percent that were complying with the look-back calculations, 84 percent of those were being filed with errors.

To assist with this the look-back emerging issue team has made recommendations to assist the practitioners with this complicated issue. The recommendations that have been requested *but not instituted* are as follows:

- Interest rates that stay the same for the entire annual period – no quarterly rates in determining the interest due or receivable
- Revise the Form 8697 and update the instructions.
- Introduce new legislation that will exempt more contracts from having to be filed.
- Offer a compliance initiative for non-filers.

However, these recommendations do not exist currently and legislation could take some time. A practitioner may question what they should do for the years that look-back has not been filed.

For the practitioner that has never filed, look-back should start immediately and continue. The claim for the amounts due to the federal government is deemed a general, nontax claim. Therefore, the IRS has a six-year statute of limitations. For the practitioner, he or she should go back and file a separate form 8697 for each completion year as though you had filed them timely on an annual basis. The individual form 8697s must be treated separately. Any overpayments and underpayments must be reported at gross. They cannot be offset by different form 8697s.

According to the IRS's "Examination and Closing Procedures for 8697, Look-Back Interest," common look-back errors are as follows:

- For refunds requested by individuals, failure to include all required signatures on Form 8697
- Improperly computing interest from the net operating loss carryback year
- Taxpayers who elect the simplified marginal impact method (SMIM) incorrectly apply it at the flow through entity level.
- The overpayment ceiling is not applied for taxpayers electing SMIM. The net hypothetical overpayment of tax should be limited to the taxpayer's total federal income tax liability as adjusted.
- Members of a consolidated group erroneously file Form 8697. The consolidated entity must file Form 8697 using the consolidated entity's EIN.
- The interest rate for computing look-back interest is incorrectly changed as the quarterly rates change: The quarterly rate that is in effect on the day after the due date of a taxpayer's return should be applied to the entire "interest accrual period", and it does not change quarterly during the year.

- Form 8697 claiming refunds are improperly attached to the tax return, reducing the current year's tax liability. Form 8697 refunds must be filed separately from the income tax return.
- Schedule of contract income allocation are not attached to the Form 8697.
- The cumulative changes to look-back taxable income and look-back tax liability for each redetermination year are not properly reported on Form 8697.

KNOWLEDGE CHECK

1. Which situation would not require look-back to be applied to a contractor?

    a. The length of a contract expands the taxable year.
    b. The contract is started and completed within the same taxable year.
    c. The contract extends more than 24 months.
    d. A long-term contract subject to percentage of completion method.

2. What look-back rule allows a taxpayer to exclude any contract where the cumulative taxable income generated from the individual contract is within 10 percent of the cumulative look-back income for each prior year in which the look-back is determined.

    a. *De minimis* election.
    b. *De minimis* exception.
    c. The 10 percent deferral method.
    d. The related party method.

The Computation of the Look-Back Calculation

The look-back method is computed as follows:

1. In the taxable year that a long-term contract is completed, recompute the income under the contract in all the taxable years before the year in which the contract is completed using the actual contract price and contract costs instead of the estimated contract price and contract costs. Many practitioners will state that one is hypothetically determining a new taxable income. The reason for such a term is that the tax liability does not actually change due to the revisiting of prior year estimates. A hypothetical taxable income is recomputed in order to determine the tax to be applied and the interest that should be calculated to that under- or overpayment of tax.

2. Determine the overpayment or underpayment of tax for each taxable year based on the preceding information for the sole purpose of computing the interest under the look-back method. Such an under- or overpayment may result in the taxpayer being subject to different tax brackets as a result of the look-back calculation.

3. Using the overpayment rate under Section 6621, compute the interest paid to or by the taxpayer based on the overpayment or underpayment of taxes determined in number two.

4. Revenue Ruling 2006-03 provides uniform tables and procedures for computing interest using the daily compounding rules under Sections 6621 and 6622.

5. Interest on amounts arising after December 31, 1982, are computed by using tables 7–30 for non-leap years and tables 31–54 for leap years, as listed in Rev. Proc. 95-17.

6. Because Section 6621 requires redetermination of the interest rate semiannually, only the effective daily rates for 184 days are published in the tables.

Applying the Look-Back Method

1. First: Hypothetically reapply the PCM to all long term contracts that are completed in the current year using the actual rather than the estimated total contract price and contract costs.

2. Second: Compare what the tax liability would have been under the PCM for each tax year for which the tax liability is affected by income from contracts completed in the filing year with the most recent determination of tax liability for that year to produce a hypothetical under- or overpayment of tax. The Regulations provide a SMIM for this step.

3. Third: Apply the rate of interest on overpayments designated under Section 6621, compounded daily to the hypothetical under- or overpayment of tax for each redetermination year to compute interest that runs from the due date of the return for the redetermination year to the due date of the return for the filing year. The net amount of interest computed is paid by or credited to the taxpayer for the filing year.

Let us look to the following example as provided by the regulations.

EXAMPLE PER REGULATIONS

CONTRACTOR'S INC.
FORM 8697 – LOOK-BACK CALCULATION
GROSS RECEIPTS TEST

Exceptions
Gross Receipts
For Year Ended:

07/31/X3	48,271,570
07/31/X4	37,382,285
07/31/X5	35,901,370
	121,555,225
	÷3
Average Annual Receipts	40,518,408

Based upon the chart, gross receipts are > $10 million; therefore, exception 2 does not apply.

Small Contract Exception
Contracts completed within two years of start date if the gross price as of completion date does not exceed the smaller of $1 million or 1 percent of average annual gross receipts for the three preceding tax years before the year of contract completion:

	40,518,408
×	1%
	405,184

Therefore, contracts of less than $405,184 are exempt from the look-back calculation.

Contractor's Inc.
Supplementary Information – Form 8697 Calculation of Taxable Income Increase (Decrease)
July 20X6
Federal ID Number: 12-3456789

Contract #	Contract	Cost Incurred to Date @ 7/31/X3	Revised Profit Recognized @ 7/31/X3	Original Profit Recognized @ 7/31/X3	Taxable Income Increase (Decrease) @ 7/31/X3
1	20X2-A	59,553	3,683	5,316	(1,633)
2	20X3-A	—	—	—	—
3	20X3-B	—	—	—	—
4	20X4-A	—	—	—	—
5	20X3-C	—	—	—	—
6	20X4-B	—	—	—	—
7	20X4-C	—	—	—	—
8	20X4-D	—	—	—	—
9	20X4-E	—	—	—	—
10	20X4-F	—	—	—	—
11	20X4-G	—	—	—	—
12	20X4-H	—	—	—	—
13	20X4-I	—	—	—	—
14	20X4-J	—	—	—	—
15	20X4-K	—	—	—	—
TOTALS, LINE 2, FORM 8697		59,553	3,683	5,316	(1,633)

Contractor's Inc.
Supplementary Information – Form 8697 Calculation of Taxable Income Increase (Decrease)
July 20X6
Federal ID Number: 12-3456789

Contract #	Contract	Cost Incurred to Date @ 7/31/X4	Revised Profit Recognized @ 7/31/X4	Original Profit Recognized @ 7/31/X4	Taxable Income Increase (Decrease) @ 7/31/X4
1	20X2-A	457,776	24,630	25,595	(965)
2	20X3-A	364,401	20,047	(6,286)	26,333
3	20X3-B	28,299	1,777	2,416	(639)
4	20X4-A	—	—	—	—
5	20X3-C	24,224	6,984	1,488	5,496
6	20X4-B	—	—	—	—
7	20X4-C	—	—	—	—
8	20X4-D	—	—	—	—
9	20X4-E	—	—	—	—
10	20X4-F	—	—	—	—
11	20X4-G	164,546	24,105	13,442	10,663
12	20X4-H	39,137	30,075	3,546	26,529
13	20X4-I	90,105	15,189	7,674	7,515
14	20X4-J	—	—	—	—
15	20X4-K	—	—	—	—
TOTALS, LINE 2, FORM 8697		1,168,488	122,807	47,875	74,932

Contractor's Inc.
Supplementary Information – Form 8697 Calculation if Taxable Income Increase (Decrease)
July 20X6
Federal ID Number: 12-3456789

Contract #	Contract	Cost Incurred to Date @ 7/31/X5	Revised Profit Recognized @ 7/31/X5	Original Profit Recognized @ 7/31/X5	Taxable Income Increase (Decrease) @ 7/31/X5
1	20X2-A	803,173	21,363	12,186	9,177
2	20X3-A	407,353	2,363	14,357	(11,994)
3	20X3-B	2,157,814	133,723	79,502	54,221
4	20X4-A	131,177	45,471	43,341	2,130
5	20X3-C	394,089	106,632	113,059	(6,427)
6	20X4-B	1,441,251	145,832	95,550	50,282
7	20X4-C	552,889	116,417	112,142	4,275
8	20X4-D	370,349	35,540	41,748	(6,208)
9	20X4-E	315,408	90,434	79,856	10,578
10	20X4-F	491,406	156,840	149,968	6,872
11	20X4-G	389,083	32,893	45,470	(12,577)
12	20X4-H	420,373	292,958	311,112	(18,154)
13	20X4-I	443,295	59,537	65,695	(6,158)
14	20X4-J	644,969	65,735	71,421	(5,686)
15	20X4-K	163,371	117,116	53,380	63,736
TOTALS, LINE 2, FORM 8697		9,126,000	1,422,854	1,288,787	134,067

Contractor's Inc.
Supplementary Information – Form 8697 Calculation of Taxable Income
Increase (Decrease)
July 20X6
Federal ID Number: 12-3456789

Contract #	Contract	Final Contract Price @ 7/31/X6	Final Costs incurred to date @ 7/31/X6	Final Contract Gross Profit @ 7/31/X6
1	20X2-A	908,084	855,191	52,893
2	20X3-A	450,365	426,881	23,484
3	20X3-B	2,513,549	2,365,036	148,513
4	20X4-A	466,057	346,089	119,968
5	20X3-C	533,089	413,793	119,296
6	20X4-B	1,739,228	1,579,416	159,812
7	20X4-C	671,681	554,851	116,830
8	20X4-D	422,129	385,167	36,962
9	20X4-E	449,481	349,323	100,158
10	20X4-F	683,424	518,073	165,351
11	20X4-G	449,389	391,969	57,420
12	20X4-H	775,215	438,360	336,855
13	20X4-I	530,074	453,609	76,465
14	20X4-J	727,590	660,293	67,297
15	20X4-K	512,548	298,536	214,012
TOTALS, LINE 2, FORM 8697		11,831,903	10,036,587	1,795,316

Contractor's Inc.
Supplementary Information – Form 8697 Calculation of Taxable Income
Increase (Decrease)
July 20X6
Federal ID Number: 12-3456789

PROOF

Contract #	Contract	Revised Profit Recognized to 7/31/X5	Revised Profit Recognized FYE 7/31/X6	Total Gross Profit from Inception
1	20X2-A	49,676	3,217	52,893
2	20X3-A	22,410	1,074	23,484
3	20X3-B	135,500	13,013	148,513
4	20X4-A	45,471	74,497	119,968
5	20X3-C	113,615	5,681	119,296
6	20X4-B	145,832	13,980	159,812
7	20X4-C	116,417	413	116,830
8	20X4-D	65,540	1,422	36,962
9	20X4-E	90,434	9,724	100,158
10	20X4-F	156,840	8,511	165,351
11	20X4-G	56,997	423	57,420
12	20X4-H	323,033	13,822	336,855
13	20X4-I	74,726	1,739	76,465
14	20X4-J	65,735	1,562	67,297
15	20X4-K	117,116	96,896	214,012
TOTALS, LINE 2, FORM 8697		1,549,343	245,973	1,795,316

CONTRACTOR'S INC.
LOOK-BACK CALCULATION
RECOMPUTATION OF TAX LIABILITY AND COMPUTATION OF INTEREST
A: 7/31/X5

	7/31/X3	7/31/X4	7/31/X5
Taxable income as originally reported	14,677	721,458	324,243
Increase or (Decrease) in taxable income	(1,633)	74,931	134,067
Adjusted taxable income	13,044	796,389	458,310
Adjusted income tax liability	(A)2,363	270,772	155,825
Original income tax liability	(A)2,689	244,809	109,705
Increase (Decrease) in tax	(326)	25,963	46,120

INTEREST COMPUTATION FYE 7/31/X3:

FROM	TO	# DAYS	(1) FACTOR	INTEREST FOR PERIOD	FACTOR TABLE
10/15/X3	12/31/X3	77	0.012701909	(4.14)	65
1/1/X4	3/31/X4	90	0.014903267	(4.85)	17
4/1/X4	6/30/X4	91	0.015070101	(4.91)	17
7/1/X4	9/30/X4	92	0.015236961	(4.96)	17
10/1/X4	12/31/X4	92	0.015236961	(4.96)	17
1/1/X5	3/31/X5	90	0.014903267	(4.85)	17
4/1/X5	6/30/X5	91	0.015070101	(4.91)	17
7/1/X5	9/30/X5	92	0.017798686	(5.79)	19
10/1/X5	12/31/X5	92	0.020366804	(6.63)	21
1/1/X6	3/31/X6	90	0.019919667	(6.48)	21
4/2/X6	6/30/X6	91	0.020143211	(6.56)	21
7/1/X6	9/30/X6	92	0.020366804	(6.63)	21
10/1/X6	10/15/X6	15	0.003292720	(1.07)	21
				(66.74)	

INTEREST COMPUTATION FYE 7/31/X4:

FROM	TO	# DAYS	(1) FACTOR	INTEREST FOR PERIOD	FACTOR TABLE
10/1/X4	12/31/X4	92	0.015236961	395.60	17
1/1/X5	3/31/X5	90	0.014903267	386.94	17
4/1/X5	6/30/X5	91	0.015070101	391.27	17
7/1/X5	9/30/X5	92	0.017798686	462.11	19
10/1/X5	12/31/X5	92	0.020366804	528.79	21
1/1/X6	3/31/X6	90	0.019919667	517.18	21
4/2/X6	6/30/X6	91	0.020143211	522.97	21
7/1/X6	9/30/X6	92	0.020366804	528.79	21
10/1/X6	10/15/X6	15	0.003292720	85.50	21
				3,819.15	

INTEREST COMPUTATION FYE 7/31/X5:

FROM	TO	# DAYS	(1) FACTOR	INTEREST FOR PERIOD	FACTOR TABLE
10/1/X5	12/31/X5	92	0.020366804	939.33	21
1/1/X6	3/31/X6	90	0.019919667	918.70	21
4/1/X6	6/30/X6	91	0.020143211	929.01	21
7/1/X6	9/30/X6	92	0.020366804	939.33	21
10/1/X6	10/15/X6	15	0.003292720	151.86	21
				3,878.23	

(1) EXAMPLE ONLY – See interest tables in applicable revenue procedure

SIMPLIFIED MARGINAL IMPACT METHOD

Due to the complexity and administrative burden presented by the look-back calculation, the IRS offers the taxpayer an alternative in reporting look-back. In evaluating the option, the practitioner needs to be aware that even though the alternative is less complicated, the option may have a detrimental impact to your contractor client.

Treas. Reg. 1.460-6(d) permits the use of the SMIM. This method assumes that the tax rate for each period considered is the highest statutory tax rate in effect for that year. The method also assumes that the taxpayer has neither offsetting net operating losses nor available tax credits.

OTHER CONSIDERATIONS

Post-Completion Revenue and Expense

The regulations require that look-back be calculated no later than the year the contract is "complete." In this context, "complete" has the same definition it has under the completed-contract regulations discussed in the last chapter, that is, when final completion and acceptance have occurred. The look-back calculation must be made even if the contractor reasonably expects to incur additional contract costs.

In general, when post-completion costs are incurred or post-completion revenues received, a contractor must perform additional look-back calculations. Treas. Reg. 1.460-6(e) provides an exception to this general rule known as the "delayed reapplication method."

The delayed reapplication method is designed to minimize the number of required reapplications of the look-back method and is available for multiple post-completion adjustments. Under the delayed reapplication method, the taxpayer is allowed to accumulate settlements for up to five years or until the price or cost adjustments exceed $1,000,000 or 10 percent of the contract price as of that time.

The contractor also has the option to discount post-completion revenues and expenses. This discount will lower the value of post-completion adjustments.

The discount rate for this purpose is the federal mid-term rate under Section 1274(d) in effect at the time the amount is properly taken into account. Unless the contractor elects not to discount post-completion adjustments for a given contract, they must be discounted from the date they are incurred back to the contract completion date.

Value-Added Advice

The election to discount is made on a contract-by-contract basis. Activities that are discounted for one contract need not be discounted for others.

Discounting revenue will result in a lower amount of gross profit for look-back purposes. Therefore, it is to your client's advantage to discount all contracts that have net post-completion revenue.

Discounting expenses will result in a higher amount of gross profit. Thus, you should elect not to discount all contracts that have net post-completion expenses.

10 Percent Deferral

The application of the look-back calculation can affect large contractors who employ the 10 percent deferral election permitted under Section 460(b)(5). Such recomputing of the percent complete in prior years can increase the percentage of completion resulting in income recognition on a contract that was deferred in the earlier years. In this instance, only the hypothetical tax liability changes. The increase in percent complete does not add to the liability but does increase the interest owed. Keep in mind, that such an event that can increase percent complete may also trigger contracts that were previously taxable and may fall under the 10 percent deferral.

Contract Price

For the purpose of look-back, the amount that is treated as the total contract price for purposes of applying the PCM and reapplying the PCM under the "hypothetical" determination includes all amounts that the taxpayer expects to receive from the customer. Thus, amounts are treated as part of the contract price as soon as it is reasonably estimated that they will be received, even if the all-events test has not yet been met.

Change Orders

Practitioners differ on the treatment of modifications and change orders. Some believe that modifications and change orders must be taken into account in allocating contract income to all tax years of the contract, including tax years before the change order was agreed to, even when that approach results in profits being allocated to an earlier year and look-back interest being assessed. If this viewpoint is adopted, the practitioner must be aware of the cost attributable to such modifications and change orders and apply the estimate in the denominator in determining the percent complete.

If a practitioner takes the viewpoint that modifications and change orders should not apply, one must have ample documentation to reflect at what period the change order became effective. Such determination may add significant time and complexities to the look-back calculation.

Summary

Almost all contractors must use estimates to determine taxable income. The use of estimates to determine profitability on jobs that are in progress can vary from how the job actually finishes and the IRS requires the contractor to *look back* at the estimates to combat these variations. Although over-reporting of income on tax returns may occur, underreporting of income as a result of using estimates is the IRS's primary concern. The calculation the IRS introduced the look-back calculation. The look-back calculation must be applied to all long term contracts reported under the percentage of completion for not only regular income tax but also for contracts that meet reporting requirements under the AMT regulations with certain exceptions.

Chapter 14

TAX PLANNING FOR THE CONTRACTOR

LEARNING OBJECTIVE

After completing this chapter, you should be able to do the following:

- Recall the details of the construction contractor's tax-planning process.

INTRODUCTION

By gaining an understanding of the previous chapters on contractor taxation, it should be apparent that the tax planning for a contractor should be a well-thought out process. However, the CPA cannot approach a contractor at year end and just think about saving the contractor money on their tax liability. The process of tax planning cannot disregard the implications of how a contractor's tax strategy may affect the contractor's financial statements. A practitioner that plans the contractor out of paying taxes may very well plan the contractor out of being able to bond any contracts for the upcoming year.

The practitioner must review the implementation of tax strategies from both a tax effect and a financial statement effect. It would be best for the practitioner to incorporate such financial statement effect into the tax planning approach. This chapter will offer suggestions and provide working paper guidance the practitioner should incorporate into their end of year planning process when dealing with contractors.

KNOWLEDGE CHECK

1. Tax planning for the construction company should consider not only tax liability minimization but also

    a. Individual tax matters.
    b. Ability to bond future work.
    c. Officer compensation.
    d. Succession planning.

Financial Analysis

Prior to any tax planning, the practitioner should review the contractor's financial position as of the end of the year. In order to make the tax planning and financial analysis as effective as possible, the financial records should reflect as accurate a picture as possible. Financial statements that lack some of the most common contractor bookkeeping entries will affect the CPA's decisions on tax strategies and also in making decisions from a financial perspective.

Case in Point

- ABC Contractor had a very successful year in his business in 2015. Tax planning was a necessity. Leading up to the fiscal year end, work had been slowed down tremendously to prepare for a contract that was being negotiated. The contractor at the CPA's advice made bonus and equipment purchase decisions based on financial statements on hand at the time in order to maximize the bonus depreciation offered. Unknowingly to the contractor and the CPA, many of the accounts payables had not been entered for December. The decisions made at year end would not have been made had the payables been properly reflected.

The financial analysis will constitute deriving the ratios discussed in our chapter on benchmarking. Using ratios from the CFMA Annual Survey or other *construction* industry financial benchmarks will guide the practitioner in understanding the impact of tax strategies implemented by the CPA.

Exhibit 14-1 provides an example of such a financial analysis.

Exhibit 14-1

Financial Analysis	Acceptable Range	Fiscal Year End 2003	2002	2001	2000
Balance Sheet Ratios					
Cash	≥ 20%	722,500	452,000	325,000	345,000
Cash to Equity		41.87%	106.73%	74.97%	133.47%
Working Capital		82,540	1,750,000	1,100,000	875,000
WC to Revenue	5-10%	0.50%	19.44%	12.05%	9.83%
Stockholder's Equity		1,725,540	423,480	433,480	258,480
Equity to Revenue	15% or more	10.46%	4.71%	4.75%	2.90%
Bonding capacity (10x)		825,400	17,500,000	11,000,000	8,750,000
Underbillings		83,000	75,000	92,000	115,000
Underbillings to equity	≤ 5%	4.81%	0.18	0.21	0.44
Overbillings		145,000	468,000	315,000	355,500
Cash to overbillings	≥ 1.0	4.98	0.97	1.03	0.97
Net overbillings/(under)billings		62,000	393,000	223,000	240,500
Net overbillings/(under)billings to revenue	≥ 5%	0.38%	4.37%	2.44%	2.70%
Income Statement Ratios					
Revenue		16,500,000	9,000,000	9,125,000	8,900,000
Gross profit		2,335,000	1,125,000	1,642,500	1,490,750
Gross profit percentage		14.15%	12.50%	18.00%	16.75%
SG&A Expenses		968,240	1,135,000	1,467,500	1,385,750
SG&A Expense Percentage		5.87%	12.61%	16.08%	15.57%
SG&A Without Ofcr Salry		743,240	885,000	1,217,500	1,135,750
Net income		1,302,060	(10,000)	175,000	105,000
Backlog gross profit		95,000	425,000	270,000	665,000
Backlog gross profit as a % of SG&A	Greater than 50%	9.81%	37.44%	18.40%	47.99%

The financial analysis as shown in the table will provide the CPA and the contractor a picture of the contractor's financial position. By providing the most accurate before-tax adjustment financial picture, the CPA can determine the impact of the tax strategy selected from the CPA. Also, the preview of the financial statements may direct the CPA to be less tax minded and more financial statement minded.

Tax Planning Process

As with any client in the tax planning process, we must determine the impact of prior year tax adjustments. The reversal of tax accruals in the previous year must be added back to determine the current year impact. Particularly for contractors, deferrals that should be considered include some of the following based on the contractor's long-term contract method:

- Completed contract adjustments
- Retention receivable and payable amounts
- Percentage of completion
- Ten percent deferral
- Under- and overbilling adjustments
- Cash to accrual reversals
- Other

Practice Pointer

- In any year in which the contractor has significant tax deferrals into a subsequent year, the CPA may find it wise to continually inform the contractor of such deferrals. These deferrals, particularly those relating to contracts in progress, can have significant consequences in the following year. The contractor and the CPA should be prepared and informed of such deferrals prior to any tax planning process.

In addition to the contract accounting adjustments, any remaining net operating loss carryforwards should be considered at the beginning. Lack of consideration of such carryforwards will cause the CPA to suggest tax planning strategies without taking advantage of existing benefits generated from previous years.

Also, when considering the impact of the previously mentioned contractor tax strategies, the CPA should evaluate whether alternative minimum tax was assessed in previous years. The payment of AMT in previous years will allow us to bring forward a credit against any current year regular income taxes.

Once prior year tax adjustments are reflected in the current year tax planning process, the CPA must prepare the more common adjustments including some of the following common to contractors:

- Differences in book and tax depreciation
- Differences in book and tax gain or loss transactions
- Meals and entertainment
- Officer life insurance
- Other

In addition to some of the more common adjustments as previously mentioned, the CPA must then consider the impact of the contractor's long-term contract adjustment. These have been discussed in the previous chapters but for review these include the following:

- Cash method
- Accrual method
- Accrual excluding retentions
- Completed contract
- Percentage of completion (EPCM)
- Percentage of completion excluding 10 percent

Because these adjustments are automatic due to the contractor's previous election, they must be determined in the planning process. When determining the impact of the long-term contract items, the CPA must not forget about the ramifications of the alternative minimum tax on such long-term contract preference items. The CPA's omission of considering the AMT impact will eliminate any benefits offered by the CPA's tax planning. For a more detailed look at the alternative minimum tax ramifications that should be considered review chapter 12.

TAX PLANNING OPTIONS

Tax planning options may be defined as strategies that can be implemented by the contractor client at their discretion. These tax planning options are typically implemented by the contractor at the advice of the CPA. The tax planning options offered in exhibit 14-2 consist of the following:

- Officers' bonuses
- Employee bonuses
- Profit-sharing contribution
- Retention deferral on non-long term contracts

These tax planning options are a "no-brainer" for the contractor because of the amount of cash on hand and the hefty tax liability that will face the contractor if such tax planning options are not implemented. However, the problem with the various tax planning options is the effect of these tax planning options may have on the contractor's financial statements. The CPA must be aware of the financial statement implications of his or her tax planning options. The lack of consideration of financial statement applications on the CPA's part could prove to be devastating to the contractor when submitting reports to the bond agent and surety underwriters.

Based on using the tax planning options available by the CPA, the contractor is saving nearly $300,000 of taxes. A number that any contractor would be very thrilled to have available to the contractor any time. However, before presenting the enormous tax savings to the contractor, the CPA should view the ramifications to the contractor's financial statements as noted in exhibit 14-3.

Exhibit 14-2

	Before Tax Planning	After Tax Planning
Phantom Co. Book Income before tax AJEs and NC	1,302,060	1,302,060
Add:		
November/December income (loss)	35,000	35,000
Prior year deferral of income:		
SG&A Deferral	25,000	25,000
Retainage on non long-term jobs	75,000	75,000
Completed contract adjustment PY	115,000	115,000
Officer's life insurance premiums	8,000	8,000
M&E 50% exclusion	19,250	19,250
Fines and penalties	-	-
Depreciation - Book	125,000	125,000
Book loss on disposals	-	-
Tax gain on disposals	18,000	18,000
Other	-	-
Deduct:		
Franchise tax accruals	4,314	4,314
Depreciation - Tax	234,500	234,500
Book gain on disposals	3,250	3,250
Tax loss on disposals	-	-
Dividends received deduction	-	-
Increase in CSV of life insurance	3,150	3,150
Unrealized gains on investments	-	-
NOL Carryover	75,000	75,000
Completed contract deferral	185,000	185,000
Taxable income **before** tax planning	1,217,096	1,217,096
Tax planning options:		
Officers' bonuses - paid by 12/31		(225,000)
Employee bonuses		(100,000)
Profit sharing plan contribution		(250,000)
Retainage on non long-term jobs		(37,500)
Tenative taxable income	1,217,096	604,596
State Income Tax @ 5%	60,855	30,230
Federal income tax		
1st $50,000 @15%	7,500	7,500
Next $25,000 @25%	6,250	6,250
Next $25,000 @ 34%	8,500	8,500
Next $235,000 @39%	91,650	91,650
Next $9,665,000 @ 34%	301,766	44,173
Federal income tax	415,666	158,073
Total Tax	476,520	188,303
Tax savings from planning	288,218	

Exhibit 14-3 Phantom Co.

	BEFORE	TAX ALT	ENDING
Cash	722,500	(225,000)	497,500
Contract Rec	775,000		775,000
Retention Rec	310,000		310,000
Other Rec	20,000		20,000
Shareholder rec	150,000		150,000
Cost in excess of billings and earnings on uncompleted contracts	83,000		83,000
Prepaid expenses	75,000		75,000
Current Assets	2,135,500	(225,000)	1,910,500
Fixed Assets			
Equipment	1,100,000		1,100,000
Autos	475,000		475,000
Furniture and fixtures	330,000		330,000
Buildings	725,000		725,000
Accumulated depreciation	(810,000)		(810,000)
Net Fixed Assets	1,820,000	-	1,820,000
Cash surrender value life insurance	89,000		89,000
Other assets	11,000		11,000
Other Assets	100,000	-	100,000
TOTAL ASSETS	4,055,500	(225,000)	3,830,500
Note payable	330,000		330,000
Current portion of long-term debt	112,000		112,000
Accounts payable	580,000		580,000
Retention payable	175,000		175,000
Accrued expenses	574,960	138,218	713,178
Billings in excess of costs and earnings on uncompleted contracts	145,000		145,000
Current Liabilities	1,916,960	138,218	2,055,178
Long-term debt	413,000		413,000
Common stock	2,000		2,000
Additional paid in capital	125,000		125,000
Retained earnings	1,598,540	(363,218)	1,235,322
Equity	1,725,540	(363,218)	1,362,322
TOTAL LIABILITIES AND EQUITY	4,055,500	(225,000)	3,830,500

		TAX ALT	ENDING
Revenues	16,500,000		16,500,000
Cost of Sales			
Labor and burden	2,100,000		2,100,000
Materials	5,250,000		5,250,000
Subcontractors	4,780,000		4,780,000
Equipment cost	785,000		785,000
Other	1,250,000		1,250,000
Total Cost of Sales	14,165,000		14,165,000
Gross Profit	2,335,000		2,335,000
Selling General & Administrative			
Advertising	2,300		2,300
Bad debts	48,000		48,000
Contract labor	1,800		1,800
Contributions	7,800		7,800
Depreciation	13,500		13,500
Dues and subscriptions	28,000		28,000
Insurance	187,500		187,500
Meals and entertainment	38,500		38,500
Office salaries	218,000		218,000
Office supplies and postage	29,000		29,000
Officer salaries	225,000	225,000	450,000
Other	13,000		13,000
Pension	12,000		12,000
Professional services	48,000		48,000
Repairs and maintenance	7,500		7,500
Rent	22,200		22,200
Taxes, other	11,000		11,000
Taxes, payroll	35,440		35,440
Telephone and utilities	19,700		19,700
Total Selling Gen & Admin	968,240		1,193,240
	1,366,760		1,141,760
Other Income (Expense)			
Interest income	450		450
Gain on sale of assets	3,250		3,250
Bonuses	-	(100,000)	(100,000)
Interest expense	(68,400)		(68,400)
Profit sharing	-	(250,000)	(250,000)
Total Other Income (Expense)	(64,700)		(414,700)
Income Taxes	476,520	(288,218)	188,303
Net Income	1,302,060		727,060

Based on the tax options that are available, we need to review the impact that such tax alternatives will have on our overall financial statement presentation.

To implement these tax strategies, the contractor will need to disburse officer bonuses of $225,000 (in our exhibit we did not account for associated payroll taxes) of cash prior to year-end to be able to receive the deduction. The disbursement leads to a reduction in working capital and an effect on general and administrative expenses. However, in looking at general and administrative expenses, the surety's evaluation of the company will typically add back the officer salaries. Therefore, the balance sheet effect and the reduction of cash are significant to this tax strategy.

The accrual of employee bonuses and a profit sharing contribution results in approximately $124,000 in tax savings for the contractor. The profit sharing should be charged to other expense and should not have an impact to any analysis of general and administrative expenses or gross profit (may depend on how your client's surety views profit sharing contributions). The employee bonuses may be charged to either job cost or other expense depending on the purpose of the bonus. There is no effect to cash for these two alternatives because they do not have to be paid until March 15 of the following year.

However, the impact of the tax options is revealed in the effect to the contractor's working capital. Based on our "post-tax" financial statement analysis, we see that we have generated a negative working capital. This is critical to the contractor because the backlog is so low ($95,000).

At year end, it is evident the contractor will need to become more aggressive on their bidding process in order to obtain more work. However, if the preceding tax options are implemented, the surety, especially in a tight surety market, may be hesitant on bonding a large project the contractor will request to have.

In the case of Phantom, a better move may be to lower the profit sharing contribution by 50 percent and delay the owner bonuses into the next year. The bonuses can be paid on or before April 15 in order to meet the owners' tax liabilities being generated by the company. By changing to this strategy, the contractor will generate the following:

- Improved working capital by $350,000 giving a positive working capital of approximately $100,000 allowing the contractor to bid on projects at least up to $1,000,000.
- A very strong cash position. As discussed in an earlier chapter, "Cash is King" at year end. The officers' bonuses will remain in cash and not disbursed.
- The contractor is still saving approximately $121,000 in taxes by implementing these tax options.

This review should be done prior to your meeting with the contractor. Presenting $121,000 of savings is very attractive but not as attractive as $300,000. The presentation made by the CPA is very important especially if the contractor is not informed as to the importance of a strong financial statement.

KNOWLEDGE CHECK

2. Prior to any tax planning the practitioner should review the contractor's

    a. Availability of funds both company and personally.
    b. The company's financial position as of year-end.
    c. How much taxes the contractor paid in previous years.
    d. Property taxes on his personal residence.

3. Which would not need to be considered necessary in the tax planning for the contractor?

    a. Remaining net operating loss carryforwards.
    b. The impact of the long-term contract adjustment.
    c. Amount the contractor has paid for meals and entertainment.
    d. Depreciation methods of fixed assets.

Summary

The value of a CPA is most often determined based on their ability to save their client from paying taxes. This is never as true as it is in the construction industry. Because of this tax-saving mindset brought about by our clients, CPAs will typically use various tax options to both minimize total tax liabilities and defer the client's tax liabilities as long as possible. Yet, the CPA must look and determine the impact of their tax planning strategies to the impact on the contractor's financial statement. The CPA will be a short-lived hero when the tax return is presented but may become a cursed villain when their client cannot obtain future work due to bonding issues.

Appendix A

THE NEW REVENUE RECOGNITION STANDARD: FASB ASU NO. 2014-09

OVERVIEW

On May 28, 2014, the International Accounting Standards Board (IASB) and FASB issued a joint accounting standard on revenue recognition to address a number of concerns regarding the complexity and lack of consistency surrounding the accounting for revenue transactions. Consistent with each board's policy, FASB issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, and the IASB issued International Financial Reporting Standard (IFRS) 15, *Revenue from Contracts with Customers*. FASB ASU No. 2014-09 will amend the FASB *Accounting Standards Codification*® (ASC) by creating a new Topic 606, *Revenue from Contracts with Customers*, and a new subtopic 340-40, *Other Assets and Deferred Costs—Contracts with Customers*. The guidance in ASU No. 2014-09 provides what FASB describes as a framework for revenue recognition and supersedes or amends several of the revenue recognition requirements in FASB ASC 605, *Revenue Recognition*, as well as guidance within the 900 series of industry-specific topics.

As part of the boards' efforts to converge U.S. generally accepted accounting principles (GAAP) and IFRSs, the standard eliminates the transaction- and industry-specific revenue recognition guidance under current GAAP and replaces it with a principles-based approach for revenue recognition. The intent is to avoid inconsistencies of accounting treatment across different geographies and industries. In addition to improving comparability of revenue recognition practices, the new guidance provides more useful information to financial statement users through enhanced disclosure requirements. FASB and the IASB have essentially achieved convergence with these standards, with some minor differences related to the collectibility threshold, interim disclosure requirements, early application and effective date, impairment loss reversal, and nonpublic entity requirements.

The standard applies to any entity that either enters into contracts with customers to transfer goods or services or enters into contracts for the transfer of nonfinancial assets, unless those contracts are within the scope of other standards (for example, insurance or lease contracts).

EFFECTIVE OR APPLICABILITY DATE

The guidance in ASU No. 2014-09 was originally effective for annual reporting periods of public entities beginning after December 15, 2016, including interim periods within that reporting period. Early application was not permitted for public entities, including not-for-profit entities (NFPs) that have issued, or are conduit bond obligors for, securities that are traded, listed, or quoted on an exchange or an over-the-counter market and for employee benefit plans that file or furnish financial statements to the SEC.

For nonpublic entities, the amendments in the new guidance were originally effective for annual reporting periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018.

On August 12, 2015, FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, to allow entities additional time to implement systems, gather data, and resolve implementation questions. This update allows for public business entities, certain NFPs, and certain employee benefit plans to apply the new requirements to annual

reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period. Earlier application is permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period.

All other entities will now apply the guidance in ASU No. 2014-09 to annual reporting periods beginning after December 15, 2018, and interim reporting periods within annual reporting periods beginning after December 15, 2019. Application is permitted earlier only as of an annual reporting period beginning after December 15, 2016, including interim reporting periods within that reporting period, or an annual reporting period beginning after December 15, 2016, and interim reporting periods within annual reporting periods beginning one year after the annual reporting period in which an entity first applies the guidance in ASU No. 2014-09.

OVERVIEW OF THE NEW GUIDANCE

The core principle of the revised revenue recognition standard is that an entity should recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those good or services.

To apply the proposed revenue recognition standard, ASU No. 2014-09 states that an entity should follow these five steps:

1. Identify the contract(s) with a customer.
2. Identify the performance obligations in the contract.
3. Determine the transaction price.
4. Allocate the transaction price to the performance obligations in the contract.
5. Recognize revenue when (or as) the entity satisfies a performance obligation.

Under the new standard, revenue is recognized when a company satisfies a performance obligation by transferring a promised good or service to a customer (which is when the customer obtains control of that good or service). See the following discussion of the five steps involved when recognizing revenue under the new guidance.

UNDERSTANDING THE FIVE-STEP PROCESS

Step 1: Identify the Contract(s) With a Customer

ASU No. 2014-09 defines a *contract* as "an agreement between two or more parties that creates enforceable rights and obligations." The new standard affects contracts with a customer that meet the following criteria:

- Approval (in writing, orally, or in accordance with other customary business practices) and commitment of the parties
- Identification of the rights of the parties

- Identification of the payment terms
- Contract has commercial substance
- Probable that the entity will collect substantially all the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer

A contract does not exist if each party to the contract has the unilateral enforceable right to terminate a wholly unperformed contract without compensating the other party (parties).

Step 2: Identify the Performance Obligations in the Contract

A *performance obligation* is a promise in a contract with a customer to transfer a good or service to the customer.

At contract inception, an entity should assess the goods or services promised in a contract with a customer and identify as a performance obligation (possibly multiple performance obligations) each promise to transfer to the customer either

- a good or service (or bundle of goods or services) that is distinct, or
- a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer.

A good or service that is not distinct should be combined with other promised goods or services until the entity identifies a bundle of goods or services that is distinct. In some cases, that would result in the entity accounting for all the goods or services promised in a contract as a single performance obligation.

Step 3: Determine the Transaction Price

The *transaction price* is the amount of consideration (fixed or variable) the entity expects to receive in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties. To determine the transaction price, an entity should consider the effects of

- variable consideration,
- constraining estimates of variable consideration,
- the existence of a significant financing component,
- noncash considerations, and
- consideration payable to the customer.

If the consideration promised in a contract includes a variable amount, then an entity should estimate the amount of consideration to which the entity will be entitled in exchange for transferring the promised goods or services to a customer. An entity would then include in the transaction price some or all of an amount of variable consideration only to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

An entity should consider the terms of the contract and its customary business practices to determine the transaction price.

Step 4: Allocate the Transaction Price to the Performance Obligations in the Contract

The transaction price is allocated to separate performance obligations in proportion to the standalone selling price of the promised goods or services. If a standalone selling price is not

directly observable, then an entity should estimate it. Reallocation of the transaction price for changes in the standalone selling price is not permitted. When estimating the standalone selling price, entities can use various methods, including the adjusted market assessment approach, expected cost plus a margin approach, and residual approach (only if the selling price is highly variable and uncertain).

Sometimes, the transaction price includes a discount or a variable amount of consideration that relates entirely to one of the performance obligations in a contract. Guidance under the new standard specifies when an entity should allocate the discount or variable consideration to one (or some) performance obligation(s), rather than to all the performance obligations in the contract.

Step 5: Recognize Revenue When (or as) the Entity Satisfies a Performance Obligation

The amount of revenue recognized when transferring the promised good or service to a customer is equal to the amount allocated to the satisfied performance obligation, which may be satisfied at a point in time or over time. *Control of an asset* refers to the ability to direct the use of, and obtain substantially all the remaining benefits from, the asset. Control also includes the ability to prevent *other entities* from directing the use of, and obtaining the benefits from, an asset.

When performance obligations are satisfied over time, the entity should select an appropriate method for measuring its progress toward complete satisfaction of that performance obligation. The standard discusses methods of measuring progress, including input and output methods, and how to determine which method is appropriate.

Additional Guidance Under the New Standard

In addition to the five-step process for recognizing revenue, ASU No. 2014-09 also addresses the following areas:

- Accounting for incremental costs of obtaining a contract, as well as costs incurred to fulfill a contract
- Licenses
- Warranties

Lastly, the new guidance enhances disclosure requirements to include more information about specific revenue contracts entered into by the entity, including performance obligations and the transaction price.

Transition Resource Group

Due to the potential for significant changes that may result from the issuance of the new standard, FASB and the IASB have received an abundance of implementation questions from interested parties. To address these questions, the boards have formed a joint Transition Resource Group (TRG) for revenue recognition to promote effective implementation and transition to the converged standard.

Since the issuance of the standard, the TRG has met several times to discuss implementation issues raised by concerned parties and actions to take to address these issues. Refer to FASB's TRG website for more information on this group and the status of their efforts, including meeting materials and meeting summaries.

LATEST DEVELOPMENTS

Based on discussions held thus far on individual areas affected by the new standard, the TRG informed the boards that technical corrections are needed to further articulate the guidance in the standard. As a result, FASB has issued updates to clarify guidance on performance obligations, licensing, principal versus agent considerations, and other narrow-scope improvements and practical expedients.

ASU No. 2016-08, *Revenue from Contracts with Customers (Topic 606): Principle versus Agent Considerations (Reporting Revenue Gross versus Net)*, was issued in March 2016 to clarify the guidance in FASB ASC 606 with respect to principal versus agent. There is little disagreement that an entity who is a principal recognizes revenue in the gross amount of consideration when a performance obligation is satisfied. An entity who is an agent (collecting revenue on behalf of the principal) recognizes revenue only to the extent of the commission or fee that the agent collects. This ASU hopes to eliminate the potential diversity in practice when determining whether an entity is a principal or an agent by clarifying the following:

- An entity determines whether it is a principal or an agent for each distinct good or service.
- An entity determines the nature of each specified good or service (including whether it is a right to a good or service)
- When an entity is a principal, it obtains control of
  - a good or another asset from the other party that it then transfers to the customer;
  - a right to a service that will be performed by another party, which gives the entity the ability to direct that party to provide the service to the customer on the entity's behalf; or
  - a good or service from the other party that it combines with other goods or services to provide the specified good or service to the customer.
- Indicators in the assessment of control may be more or less relevant or persuasive, or both, to the control assessment, depending on the facts and circumstances.

Additional illustrative examples are also provided in ASU No. 2016-08 to further assist practitioners in applying this guidance. The effective date of this update is in line with the guidance in ASU No. 2014-09, as amended by ASU No. 2015-14.

ASU No. 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*, was issued in April 2016 to reduce potential for diversity in practice at initial application of FASB ASC 606, as well as the cost and complexity of applying FASB ASC 606 at transition and on an ongoing basis. When identifying promised goods and services in a contract, this ASU states that entities

- are not required to assess whether promised goods or services are performance obligations if they are immaterial to the contract.

- can elect to account for shipping and handling activities as an activity to fulfill promises within the contract, rather than as an additional promised service.

When assessing whether promised goods or services are distinct, this ASU emphasizes the need to determine whether the nature of the promise is to transfer

- each of the goods or services, or
- a combined item (or items) to which the promised goods or services are inputs.

With regards to licensing, ASU No. 2016-10 clarifies whether revenue should be recognized at a point in time or over time, based on whether the license provides a right to use an entity's intellectual property or a right to access the entity's intellectual property. Specifically,

- if the intellectual property has significant standalone functionality, the license does not include supporting or maintaining that intellectual property during the license period. Therefore, the performance obligation would be considered satisfied at a point in time. Examples of this type of intellectual property include software, biological compounds or drug formulas, and media.
- licenses for symbolic intellectual property include supporting or maintaining that intellectual property during the license period and, therefore, are considered to be satisfied over time. Examples of symbolic intellectual property include brands, team or trade names, logos, and franchise rights.

Lastly, ASU No. 2016-10 provides clarification on implementation guidance on recognizing revenue for sales-based or usage-based royalty promised in exchange for a license of intellectual property. The effective date of this ASU is in line with the guidance in ASU No. 2014-09, as amended by ASU No. 2015-14.

In addition to ASU Nos. 2016-08 and 2016-10, ASU No. 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*, was issued in May 2016. Topics covered in this ASU include

- clarification on contract modifications. This amendment permits an entity to determine and allocate the transaction price on the basis of all satisfied and unsatisfied performance obligations in a modified contract as of the beginning of the earliest period presented in accordance with the guidance in FASB ASC 606. An entity would not be required to separately evaluate the effects of each contract modification. An entity that chooses to apply this practical expedient would apply the expedient consistently to similar types of contracts.
- how to assess the collectibility criterion. The amendment introduces new criteria to meet the collectibility requirement. An entity should assess the collectibility of the consideration promised in a contract for the goods or services that will be transferred to the customer, rather than assessing the collectibility of the consideration promised in the contract for all the promised goods or services.
- how to report sales taxes and similar taxes. This amendment states that an entity may make an accounting policy election to exclude from the measurement of the transaction price all taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the entity from a customer (for example, sales, use, value added, and some excise taxes). Taxes assessed on an entity's total gross receipts or imposed during the inventory procurement process should be excluded from the scope of the election. An entity that makes this election should exclude from the transaction price all taxes in the scope of the election

and should comply with the applicable accounting policy guidance, including disclosure requirements.

- when to measure noncash consideration. This amendment clarifies that the measurement date for noncash consideration is contract inception. If the fair value of the noncash consideration varies because of the form of the consideration and for reasons other than the form of the consideration, an entity should apply the guidance on variable consideration only to the variability resulting from reasons other than the form of the consideration.
- how to apply transition guidance. This amendment clarifies that a completed contract for purposes of transition is a contract for which all (or substantially all) the revenue was recognized under legacy GAAP before the date of initial application. Accounting for elements of a contract that do not affect revenue under legacy GAAP are irrelevant to the assessment of whether a contract is complete. In addition, the amendment permits an entity to apply the modified retrospective transition method either to all contracts or only to contracts that are not completed contracts.

The effective date of this ASU is in line with the guidance in ASU No. 2014-09, as amended by ASU No. 2015-14.

FASB also issued ASU No. 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*, in December 2016. These amendments affect narrow aspects of guidance issued in ASU No. 2014-09, including but not limited to, guidance on

- impairment testing. When performing impairment testing, an entity should consider expected contract renewals and extensions. In addition, the assessment should include both the amount of consideration it already has received but has not yet recognized as revenue, and the amount it expects to receive in the future.
- additional scope exceptions. The term "insurance" is removed from the scope exceptions of Topic 606 to clarify that all contracts within the scope of Topic 944, *Financial Services – Insurance*, are excluded.
- provisions for losses on construction-type and production-type contracts. Such provisions should be determined at least at the contract level; however, an entity can make an accounting policy election to determine the provision for losses at the performance obligation level.
- disclosure of remaining performance obligations. Optional exemptions from the disclosure requirement are provided for remaining performance obligations when an entity is not required to estimate variable consideration to recognize revenue.

Consistent with the other ASUs, the effective date of ASU No. 2016-20 is in line with the guidance in ASU No. 2014-09, as amended by ASU No. 2015-14.

CONCLUSION

Upon implementation of the new standard, consistency of revenue recognition principles across geography and industry will be enhanced, and financial statement users will be provided better insight through improved disclosure requirements. To provide CPAs with guidance during this time of transition, the AICPA's Financial Reporting Center (FRC) offers invaluable resources on the topic, including a roadmap to ensure that companies take the necessary steps to prepare themselves for the new standard. In addition, the FRC includes a list of conferences, webcasts, and other products to keep you informed on upcoming changes in revenue recognition. Refer to www.aicpa.org/ INTERESTAREAS/ FRC/ ACCOUNTINGFINANCIALREPORTING/ REVENUERECOGNITION/ Pages/ RevenueRecognition.aspx to stay updated on the latest information available on revenue recognition.

Appendix B

THE NEW LEASES STANDARD: FASB ASU NO. 2016-02

OVERVIEW

Issuance and Objective

On February 25, 2016, FASB issued Accounting Standards Update (ASU) No. 2016-02, *Leases (Topic 842)*. The objective of the ASU is to increase transparency and comparability in financial reporting by requiring balance sheet recognition of leases and note disclosure of certain information about lease arrangements. This ASU codifies the new FASB ASC topic 842, *Leases*, and makes conforming amendments to other FASB ASC topics.

The new FASB ASC topic on leases consists of these subtopics:

a. Overall
b. Lessee
c. Lessor
d. Sale and leaseback transactions
e. Leveraged lease arrangements

Applicability and Effective Date

ASU 2016-02 is applicable to any entity that enters into a lease and is effective as follows:

	Fiscal Years Beginning After	Interim Periods within Fiscal Years Beginning After
Public business entities, certain not-for-profit entities with conduit financing arrangements, and employee benefit plans	December 15, 2018	December 15, 2018
All other entities	December 15, 2019	December 15, 2020

FASB ASC 842 applies to all leases and subleases of property, plant, and equipment; it specifically does not apply to the following nondepreciable assets accounted for under other FASB ASC topics:

a. Leases of intangible assets
b. Leases to explore for or use nonregenerative resources such as minerals, oil, and natural gas
c. Leases of biological assets, such as timber
d. Leases of inventory
e. Leases of assets under construction

Main Provisions

Overall

Identifying a Lease

Key changes in the guidance are illustrated by comparing the definition of a lease in FASB ASC 840 (extant GAAP) and FASB ASC 842.

FASB ASC 840	FASB ASC 842
An agreement conveying the right to use property, plant, or equipment (land and/or depreciable assets) usually for a stated period of time.	A contract, or part of a contract, that conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration.

The identification of a lease under FASB ASC 842 should be based on the presence of key elements in the definition.

Separating Components of a Lease Contract

Under FASB ASC 842, a contract that contains a lease should be separated into lease and nonlease components. Separation should be based on the right to use; each underlying asset should be considered to be separate from other lease components when both of the following criteria are met:

a. The lessee can benefit from the right-of-use of the asset (either alone or with other readily available resources)
b. The right-of-use is neither highly dependent on or highly interrelated with other underlying assets in the contract

The consideration in the contract should be allocated to the separate lease and nonlease components in accordance with provisions of FASB ASC 842.

Lessees can make an accounting policy election to treat both lease and nonlease elements as a single lease component.

Lease Classification

When a lease meets any of the following specified criteria at commencement, the lease should be classified by the lessee and lessor as a finance lease and a sales-type lease, respectively. These criteria can be summarized as follows:

a. Transfers ownership to lessee
b. Purchase option reasonably certain to be exercised
c. Lease term for major portion of asset's remaining economic life
d. Present value of lease payments and residual value exceeds substantially all of the fair value of the underlying asset

e. Specialized nature of underlying asset results in no expectation of alternative use after the lease term

If none of the above criteria are met, the lease should be classified as follows:

Lessee—classify as an operating lease

Lessor – classify as an operating lease unless (1) the present value of the lease payments and any residual value guarantee that equals or exceeds substantially all of the fair value of the underlying asset and (2) it is probable that the lessor will collect the lease payments plus any residual value guarantee. If both of these summarized criteria from FASB ASC 8428-10-25-3 are met, the lessor should classify the lease as a direct financing lease.

Lease Term and Measurement

The lease term is the noncancellable period of the lease together with all of the following:

a. Period covered by the option for the lessee to extend the lease if the option is reasonably certain to be exercised
b. Period covered by option for lessee to terminate the lease if reasonably certain not to be exercised
c. Period covered by option for lessor to extend or not terminate the lease if option is controlled by lessor.

Lease payments relating to use of the underlying asset during the lease term include the following at the commencement date:

a. Fixed payments less incentives payable to lessee
b. Variable lease payments based on an index or other rate
c. Exercise price of an option to purchase the underlying asset if it is reasonably certain to be exercised
d. Payments for penalties for terminating a lease if the lease term reflects exercise of lessee option
e. Fees paid by the lessee to the owners of a special purpose entity for structuring the lease
f. For lessee only, amounts probable of being owed under residual value guarantees

Lease payments specifically exclude the following:

a. Certain other variable lease payments
b. Any guarantee by the lessee of the lessor's debt
c. Certain amounts allocated to nonlease components

Reassessment of the lease term and purchase options, and subsequent remeasurement by either the lessee or lessor are limited to certain specified circumstances.

Lessee

Recognition and Measurement

Commencement Date

At the commencement date of the lease, a lessee should recognize a right-of-use asset and a lease liability; for short term leases, an alternative accounting policy election is available.

The lease liability should be measured at the present value of the unpaid lease payments. The right-of-use asset should consist of the following: the amount of the initial lease liability; any lease payments made to lessor at or before the commencement date minus any incentives received; and initial direct costs.

A short term lease is defined by the FASB ASC master glossary as a lease that, at the commencement date has a lease term of 12 months or less and does not include an option to purchase the underlying asset that the lessee is reasonably certain to exercise. The accounting policy election for short term leases should be made by class of underlying asset. The election provides for recognition of the lease payments in profit or loss on a straight-line basis over the lease term and variable lease payments in the period in which the obligation for those payments is incurred.

After the Commencement Date

After the commencement date, the lessee should recognize in profit or loss (unless costs are included in the carrying amount of another asset) the following:

- Finance leases:
    a. Amortization of the right-of-use asset and interest on the lease liability
    b. Variable lease payments not included in the lease liability in the period obligation incurred
    c. Any impairment
- Operating leases:
    a. A single lease cost calculated such that the remaining cost is allocated on a straight line basis over the remaining lease term (unless another allocation is more representative of the benefit from use of the asset)
    b. Variable lease payments not included in the lease liability in the period in which the obligation is incurred
    c. Any impairment

Subsequent Measurement

FASB ASC 842-20-35 provides guidance for subsequent measurement.

Presentation and Disclosure

Key presentation matters include the following:

- Statement of financial position
    - Separate presentation of right-of-use assets and lease liabilities from finance leases and operating leases.
- Statement of comprehensive income.
    - Finance leases–interest expense on the lease liability and amortization of right-of-use asset in a manner consistent with how the entity presents other interest expense and depreciation or amortization of similar assets.
    - Operating leases–expense to be included in the lessee's income from continuing operations.

- Statement of cash flows.
    - Presentation within financing activities–the repayment of the principal portion of the lease liability arising from finance leases.
    - Presentation within operating activities–payments arising from operating leases; interest payments on the lease liability; variable lease payments and short term lease payments not included in lease liability.

Disclosure requirements include qualitative and quantitative information for leases, significant judgements, and amounts recognized in the financial statements, including certain specified information and amounts.

Lessor

Recognition and Measurement

FASB ASC 842 provides recognition guidance for sales-type leases, direct financing leases, and operating leases. The following table summarizes the guidance:

Sales-Type Leases	
At the Commencement Date	**After the Commencement Date**
Lessor should derecognize the underlying asset and recognize the following: a. Net investment in the lease (lease receivable and unguaranteed residual asset) b. Selling profit or loss arising from the lease c. Initial direct costs as an expense	Lessor should recognize all of the following: a. Interest income on the net investment in the lease b. Certain variable lease payments c. Impairment
Direct Financing Leases	
At the Commencement Date	**After the Commencement Date**
Lessor should derecognize the underlying asset and recognize the following: a. Net investment in the lease (lease receivable and unguaranteed residual asset reduced by selling profit) b. Selling loss arising from the lease, if applicable	Lessor should recognize all of the following: a. Interest income on the net investment in the lease b. Certain variable lease payments c. Impairment

Operating Leases	
At the Commencement Date	**After the Commencement Date**
Lessor should defer initial direct costs.	Lessor should recognize all of the following: a. The lease payments as income in profit or loss over the lease term on a straight line basis (unless another method in more representative of the benefit received) b. Certain variable lease payments as income in profit or loss c. Initial direct costs as an expense over the lease term on the same basis as lease income

FASB ASC 842-30-35 provides guidance for subsequent measurement.

Presentation and Disclosure

Key presentation matters include the following:

For sales-type and direct financing leases:

- Statement of financial position
  - Separate presentation of lease assets (that is, aggregate of lessor's net investment in sales-type leases and direct financing leases) from other assets.
  - Classified as current or noncurrent based on same considerations as other assets
- Statement of comprehensive income
  - Presentation of income from leases in the statement of comprehensive income or disclosure of income from leases in the notes with a reference to the corresponding line in the statement of comprehensive income.
  - Presentation of profit or loss recognized at commencement date in a manner appropriate to lessor's business model.
- Statement of cash flows
  - Presentation within operating activities–cash receipts from leases.

For operating leases:

- Statement of financial position
  - Presentation of an underlying asset subject to an operating leases in accordance with other FASB ASC topics.
- Statement of cash flows
  - Presentation within operating activities–cash receipts from leases.

Disclosure requirements include qualitative and quantitative information for leases, significant judgements, and amounts recognized in the financial statements, including certain specified information and amounts.

Sale and Leaseback Transactions

FASB ASC 842 provides guidance for both the transfer contract and the lease in a sale and leaseback transaction (a transaction in which a seller-lessee transfers an asset to a buyer-lessor and leases that asset back). Determination of whether the transfer is a sale should be based on provisions of FASB ASC 606, *Revenue from Contracts with Customers*. FASB ASC 842-40-25 provides measurement guidance for a transfer that is either determined to be a sale or determined not to be a sale.

FASB ASC 842-40 provides guidance for subsequent measurement, financial statement presentation, and disclosures.

Leveraged Lease Arrangements

The legacy accounting model for leveraged leases continues to apply to those leveraged leases that commenced before the effective date of ASC 842. There is no separate accounting model for leveraged leases that commence after the effective date of ASC 842.

CONSTRUCTION CONTRACTORS GLOSSARY

Back Charges – Billings for work performed or costs incurred by one party that, in accordance with the agreement, should have been performed or incurred by the party to whom billed. Owners bill back charges to general contractors, and general contractors bill back charges to subcontractors. Examples of back charges include charges for cleanup work and charges for a subcontractor's use of a general contractor's equipment.

Backlog – The amount of revenue that a contractor expects to be realized from work to be performed on uncompleted contracts, including new contractual agreements on which work has not begun.

Bid – A formal offer by a contractor, in accordance with specifications for a project, to do all or a phase of the work at a certain price in accordance with the terms and conditions stated in the offer.

Bid Bond – A bond issued by a surety on behalf of a contractor that provides assurance to the recipient of the contractor's bid that, if the bid is accepted, the contractor will execute a contract and provide a *performance bond*. Under the bond, the surety is obligated to pay the recipient of the bid the difference between the contractor's bid and the bid of the next lowest responsible bidder if the bid is accepted and the contractor fails to execute a contract or to provide a performance bond.

Bid Security – Funds or a *bid bond* submitted with a bid as a guarantee to the recipient of the bid that the contractor, if awarded the contract, will execute the contract in accordance with the bidding requirements and the contract documents.

Bid Shopping – A practice by which contractors, both before and after their bids are submitted, attempt to obtain prices from potential subcontractors and material suppliers that are lower than the contractors' original estimates on which their bids are based, or, after a contract is awarded, seek to induce subcontractors to reduce the subcontract price included in the bid.

Bidding Requirements – The procedures and conditions for the submission of bids. The requirements are included in documents such as the notice to bidders, advertisement for bids, instructions to bidders, invitations to bid, and sample bid forms.

Bonding Capacity – The total dollar value of construction bonds that a surety will underwrite for a contractor, based on the surety's predetermination of the overall volume of work that the contractor can handle.

Bonding Company – A company authorized to issue *bid bonds, performance bonds, labor and materials bonds*, or other types of surety bonds.

Bonus Clause – A provision in a construction contract that provides for payments to the contractor in excess of the basic contract price as a reward for meeting or exceeding various contract stipulations, such as the contract completion date or the capacity, quality, or cost of the project.

Broker – A party that obtains and accepts responsibility as a *general contractor* for the overall performance of a contract but enters into *subcontracts* with others for the performance of virtually all construction work required under the contract.

Builders' Risk Insurance – Insurance coverage on a construction project during construction, including extended coverage that may be added for the contractor's protection or required by the contract for the customer's protection.

Building Codes – The regulations of governmental bodies specifying the construction standards that buildings in a jurisdiction must meet.

Building Permit – An official document issued by a governing body for the construction of a specified project in accordance with drawings and specifications approved by the governing body.

Change Orders – Modifications of an original contract that effectively change the provisions of the contract without adding new provisions. They include changes in specifications or design, method or manner of performance, facilities, equipment, materials, site, and period for completion of work.

Claims – Amounts in excess of the agreed contract price that a contractor seeks to collect from customers or others for customer-caused delays, errors in specifications and designs, unapproved change orders, or other causes of unanticipated costs.

Completed and Accepted – A procedure relating to the time for closing jobs for tax purposes under the completed-contract method of accounting that allows closing a job when construction is physically completed and the customer has formally accepted the project as defined in the contract.

Completion Bond – A document providing assurance to the customer and the financial institution that the contractor will complete the work under the contract and that funds will be provided for the completion.

Construction Loan – Interim financing for the development and construction of real property.

Construction Management Contractor – A party who enters into an agency contract with the owner of a construction project to supervise and coordinate the construction activity on the project, including negotiating contracts with others for all the construction work.

Contract Bond – An approved form of security executed by a contractor and a surety for the execution of the contract and all supplemental agreements, including the payment of all debts relating to the construction of the project.

Contract Cost Breakdown – An itemized schedule prepared by a contractor after the receipt of a contract showing in detail the elements and phases of the project and the cost of each element and phase.

Contract Item (Pay Item) – An element of work, specifically described in a contract, for which the contract provides either a unit or lump-sum price.

Contract Overrun (Under Run) – The amount by which the original contract price, as adjusted by *change orders*, differs from the total cost of a project at completion.

Contract Payment Bond – The security furnished by the contractor to guarantee payment for labor and materials obtained in the performance of the contract. (See **Payment (Labor and Materials) Bond**.)

Contract Performance Bond – The security furnished by the contractor to guarantee the completion of the work on a project in accordance with the terms of the contract. (See **Performance Bond**.)

Critical Path Method (C.P.M.) – A network scheduling method that shows the sequences and interdependencies of activities. The critical path is the sequence of activities that shows the shortest time path for completion of the project.

Draw – The amount of *progress billings* on a contract that is currently available to a contractor under a contract with a fixed payment schedule.

Escalation Clause – A contract provision that provides for adjustments of the price of specific items as conditions change (e.g., a provision that requires wage rates to be determined on the basis of wage levels established in agreements with labor unions).

Estimate (Bid Function) – The amount of labor, materials, and other costs that a contractor anticipates for a project, as summarized in the contractor's bid proposal for the project.

Estimated Cost to Complete – The anticipated additional cost of materials, labor, and other items required to complete a project at a scheduled time.

Extras (Customer's Extras) – Additional work, not included in the original plan, requested of a contractor that will be billed separately and will not alter the original contract amount.

Final Acceptance – The customer's acceptance of the project from the contractor on certification by an architect or engineer that the project is completed in accordance with contract requirements. The customer confirms final acceptance by making final payment under the contract unless the time for making the final payment is otherwise stipulated.

Final Inspection – The final review of the project by an architect or engineer before issuance of the final certificate for payment.

Front-End Loading – A procedure under which *progress billings* are accelerated in relation to costs incurred by assigning higher values to contract portions that will be completed in the early stages of a contract than to those portions that will be completed in the later stages so that cash receipts from the project during the early stages will be higher than they otherwise would be.

General Contractor – A contractor who enters into a contract with the owner of a project for the construction of the project and who takes full responsibility for its completion, although the contractor may enter into *subcontracts* with others for the performance of specific parts or phases of the project.

Incentives – (See **Bonus Clause** and **Penalty Clause**.)

Joint Venture – An entity owned, operated, and jointly controlled by a small group of participants as a separate and specific business or project for the mutual benefit of the participants, including arrangements for pooling equipment, bonding, financing, and sharing skills (such as engineering, design, and construction).

Letter Agreement (Letter of Agreement) – A letter stating the terms of an agreement between addressor and addressee, usually prepared for signature by the addressee as indication of acceptance of those terms as legally binding.

Letter of Intent – A letter signifying an intention to enter into a formal agreement and usually setting forth the general terms of such an agreement.

Lien – An encumbrance that usually makes real or personal property the security for payment of a debt or discharge of an obligation.

Liquidated Damages – Construction contract clauses obligating the contractor to pay specified daily amounts to the project owner as compensation for damages suffered by the owner because of the contractor's failure to complete the work within a stated time.

Loss Contract – A contract on which the estimated cost to complete exceeds the contract price.

Maintenance Bond – A document, given by the contractor to the owner, guaranteeing to rectify defects in workmanship or materials for a specified time following completion of the project. A one-year bond is normally included in the performance bond.

Mechanic's Lien – A lien on real property, created by statute in many areas, in favor of persons supplying labor or materials for a building or structure, for the value of labor or materials supplied by them. In some jurisdictions, a mechanic's lien also exists for the value of professional services. Clear title to the property cannot be obtained until the claim for the labor, materials, or professional services is settled. Timely filing is essential to support the encumbrance, and prescribed filing dates vary by jurisdiction.

Negotiated Contract – A contract for construction developed through negotiation of plans, specifications, terms, and conditions without competitive bidding.

Payment (Labor and Materials) Bond – A bond executed by a contractor to protect suppliers of labor, materials, and supplies to a construction project.

Penalty Clause – A provision in a construction contract that provides for a reduction in the amount otherwise payable under a contract to a contractor as a penalty for failure to meet targets or schedules specified in the contract or for failure of the project to meet contract specifications.

Performance Bond – A bond issued by a surety and executed by a contractor to provide protection against the contractor's failure to perform a contract in accordance with its terms.

Prequalification – The written approval of an agency seeking bids on a project that authorizes a contractor to submit a bid on the project in circumstances in which bidders are required to meet certain standards.

Prime Contract – A contract between an owner of a project and a contractor for the completion of all or a portion of a project under which the contractor takes full responsibility for the completion of the work.

Prime Contractor – A contractor who enters into a contract with the owner of the project for the completion of all or a portion of the project and who takes full responsibility for its completion. (See **General Contractor**.)

Progress (Advance) Billings – Amounts billed, in accordance with the provisions of a contract, on the basis of progress to date under the contract.

Punch List – A list made near the completion of work indicating items to be furnished or work to be performed by the contractor or subcontractor in order to complete the work as specified in the contract.

Quantity Takeoffs – An itemized list of the quantities of materials and labor required for a project, with each item priced and extended, which is used in preparing a bid on the project.

Retentions – Amounts withheld from progress billings until final and satisfactory project completion.

Specifications (Specs) – A written description of the materials and workmanship required on a project (as shown by related working drawings), including standard and special provisions related to the quantities and qualities of materials to be furnished under the contract.

Stop Order – A formal notification to a contractor to discontinue some or all work on a project for reasons such as safety violations, defective materials or workmanship, or cancellation of the contract.

Subcontract – A contract between the *prime contractor* and another contractor or supplier to perform specified work or to supply specified materials in accordance with plans and specifications for the project.

Subcontractor Bond – A bond executed by a subcontractor and given to the *prime contractor* to assure the subcontractor's performance on the *subcontract*, including the payment for all labor and materials required for the *subcontract*.

Substantial Completion – The point at which the major work on a contract is completed and only insignificant costs and potential risks remain. Revenue from a contract is recognized under the completed-contract method when the contract is substantially completed.

Surety – (See **Bonding Company**.)

Turnkey Project – A project for which a contractor undertakes under contract to deliver a fully operational and tested facility before being entitled to payment.

Unbalanced Bid – A bid proposal under which the contract price is allocated to phases or items in the contract on a basis other than that of cost plus overhead and profit for each bid item or phase. A common practice is to *front-end load* a bid proposal to obtain working capital to finance the project. Another form of unbalanced bid on unit-price contracts assigns higher profits to types of work for which the quantities are most likely to be increased during the performance of the contract.

Waiver of Lien – An instrument by which the holder of a *mechanic's or materials* lien against property formally relinquishes that right.

Warranty (Maintenance) Period – A specified period, which is normally specified in the contract, after the completion and acceptance of a project, during which a contractor is required to provide maintenance construction, and for which the contractor is required to post a *maintenance bond*.

Construction Contractors Advanced Issues

By Dale Ruther, CPA

Solutions

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SOLUTIONS

CHAPTER 1

Solutions to Knowledge Check Questions

1.

a. Incorrect. The surety may evaluate the contractor's cash balance or the amount of available credit the surety has at a financial institution, but it is not necessarily concerned with the financial institution itself.
b. Incorrect. The contractor's accountant is important to the surety in that the surety wants the accountant to be aware of issues that are unique to contractors. Because the surety is the primary user of the accountant's financial statements, the involvement of the accountant is important but not as important as the actual financial reporting.
c. Correct. The surety is very concerned with the type of reports and accounting package the contractor has for financial reporting purposes. The surety requires timely, construction-specific information from the contractor and the accounting package must be able to deliver.
d. Incorrect. While a surety may be interested in the contractor's management personnel, they are more interested in the type of reports and accounting package the contractor has for financial reporting purposes.

2.

a. Correct. FASB ASC 605-35 allows the contractor to use the percentage of completion, completed contract, or the zero profit methods. The most commonly used and most preferred is the percentage of completion.
b. Incorrect. The cash method is an acceptable tax reporting method under IRC Section 460 but is not under FASB ASC 605-35.
c. Incorrect. The straight accrual method does not meet the matching principle as required by generally accepted accounting principles and is not recommended by FASB ASC 605-35. The contractor may institute this method as part of their accounting process but it should not be used for financial reporting purposes.
d. Incorrect. Uncompleted contracts are reported under FASB ASC 605-35 and allows the contractor to use the percentage of completion, completed contract, or the zero profit methods.

3.

a. Incorrect. Billings play a role from a balance sheet perspective but not in calculating percentage complete. Billings will affect the under- and overbillings but are not considered in the percentage of completion formula.
b. Correct. The percentage of completion formula is: (*Estimated* Total Contract Price – *Estimated* Total Contract Costs) × *Estimated* Completion Percentage = *Estimated* Gross Profit to Date.
c. Incorrect. Backlog is important to the user of the financial statements but does not have anything to do with the calculation of the percentage of completion.
d. Incorrect. Unused materials are not a consideration of calculating the percentage of completion.

CHAPTER 2

Solutions to Knowledge Check Questions

1.

a. Incorrect. A detailed plan for obtaining a company's goals and objectives is just that. It is not a vision statement.
b. Correct. A vision statement is a statement that states why a company is in business.
c. Incorrect. A core values statement is not a vision statement.
d. Incorrect. A vision statement is a key piece of a contractor's strategic plan.

2.

a. Incorrect. Reviewing and improving use of technology used by the company would be a part of the contractor's technology goal.
b. Incorrect. Determining new markets the contractor may want to enter would be a part of the contractor's new markets goal.
c. Correct. Revising the company's accounting policy manual would not be a part of the goals contained in the strategic plan, but may be a short term business goal.
d. Incorrect. Determining if new geographical locations may assist the contractor in its growth would be a part of the contractor's geographic goal.

3.

a. Incorrect. Payback period represents the amount of time required for the cash flows to regain the original cost of the investment.
b. Incorrect. The internal rate of return calculation measures the rate of return from the capital investment. This calculation is based on which discount rate makes the net present value equal to zero.
c. Incorrect. The net present value involves discounting a stream of future cash flows back to present value. The present value is in cost of the initial investment.
d. Correct. The cost of the capital investment is a component of most measurement tools for the evaluation of a capital expenditure, not a tool itself.

4.

a. Incorrect. Equipment costs are a key component of an annual budget.
b. Correct. Discretionary bonus plans are commonly excluded from an annual budget.
c. Incorrect. Projected revenues are the income used in the annual budget.
d. Incorrect. Fixed overhead (billing, general and administrative costs) are costs that must be included in an annual budget.

5.

a. Incorrect. Industry averages and historical trends are included, but backlog gross profit should be included as well.
b. Incorrect. Historical trends are included, but industry averages and backlog gross profit should be included as well.
c. Incorrect. Backlog gross profit and historical trends are included, but historical trends profit should be included as well.
d. Correct. Industry averages, historical trends, and backlog gross profit should all be examined.

CHAPTER 3

1.

a. Incorrect. While important the organizational structure is not considered an integral component of the control environment.
b. Correct. Generally accepted auditing standards identify control environment, risk assessment, control activities, information and communication, and monitoring as the five components of internal control.
c. Incorrect. AU-C section 315, *Understanding the Entity and Its Environment and Assessing the Risks of Material Misstatement*, identifies management's philosophy and operating style as an integral part of the control environment along with the structure of the company, management's integrity and ethics, personnel policies and procedures, and assignment of authority and responsibility.
d. Incorrect. The number of employees is not a component of internal controls.

2.

a. Correct. Estimating and bidding is the starting point for any contractor. Estimating and bidding may pertain to many industries, but the importance of the controls over the estimating and bidding process to contractors is crucial. If controls are not in place, a poorly bid job can result in severe consequences to the contractor organization.
b. Incorrect. Financial reporting is important for all organizations including contractors. Financial reporting does serve as a monitoring component of internal control but is not considered *specifically to contractors*.
c. Incorrect. Budgeting is important for all organizations including contractors. Budgeting does serve as a monitoring component of internal control but is not considered applicable *specifically* to contractors.
d. Incorrect. The status of projects is not a control process.

3.

a. Incorrect. The field should provide accurate estimated costs to complete the project to the accounting office; however, this will be done in conjunction with the project managers.
b. Incorrect. Information should be received from the field timely to prepare the monthly billings; however, the controls overbillings is typically maintained in the main office and not at the project site.
c. Correct. Control over the hiring and dismissal of employees is essential. Many times employees are hired on the spot at job sites. The controls in this area will prevent phantom employees from existing.
d. Incorrect. While controls over the estimating process are key, these do not function at the job site.

4.

a. Correct. The terms of the contract will specify how and when billings are submitted. Therefore, if a contractor has 10 different contracts in progress at one time, there could possibly be 10 different methods of billing.
b. Incorrect. Most industries bill based on when goods are shipped or when services are rendered.
c. Incorrect. Contractors' bill based on the terms of the contract. Most contracts have billings that are once a month. If the billing is not done according to the contract, the paying party can reject the pay application until it is submitted correctly.
d. Incorrect. Billing in the construction industry are very different from other industries. The terms of the contract will specify how and when billings are submitted.

CHAPTER 4

Solutions to Knowledge Check Questions

1.

a. Incorrect. The auditor's responsibility has not changed under AU-C Section 240, *Consideration of Fraud in a Financial Statement Audit*. The methods and procedures in order to increase the likelihood of discovering fraud have changed.
b. Correct. The significant changes introduced by AU-C Section 240, *Consideration of Fraud in a Financial Statement Audit,* focus on adopting mandatory identification of fraud as it relates to revenue recognition and management's ability to override controls, a required brainstorming session, increased inquiries of management and others, expanded use of analytical procedures, and consideration of other information as it relates to the audit.
c. Incorrect. The methods and procedures in order to increase the likelihood of discovering fraud have changed but the auditor is not required to specifically look for fraud.
d. Incorrect. AU-C section 240 does not hold the auditor responsible for detecting *all* fraud.

2.

a. Incorrect. Assessing the contractor's internal controls over bidding and estimating contracts is considered important and may relate to an assessment of control risk or fraud risk in a certain area, but this is not considered a mandatory assessment under AU-C Section 240, *Consideration of Fraud in a Financial Statement Audit*.
b. Correct. AU-C Section 240, *Consideration of Fraud in a Financial Statement Audit,* requires two specific fraud risks that must be assessed and procedures must be designed to develop a response to these fraud risks. They are 1) management's ability to override controls and 2) the entity's revenue recognition.
c. Incorrect. The documentation of an internal control system is considered important and may relate to an assessment of control risk or fraud risk in a certain area, but the implementation or lack of implementation of internal controls is not a mandatory assessment under AU-C Section 240, *Consideration of Fraud in a Financial Statement A udit*.
d. Incorrect. AU-C section does not address the number of controls as a contractor.

3.

a. Incorrect. The controller may be an initial contact, but the controller typically prepares the contract schedule based on representations made by project managers, estimators, and may have biased adjustments provided by the owner.
b. Correct. For an increased effectiveness the auditor should break away from the accounting department and inquire to those who provided the information in formulating the schedule. The project managers can provide a much better picture on the status of a job than the controller and may provide a different estimate than the one represented by the controller.
c. Incorrect. The primary beneficiary of fraudulent financial reporting would be the owner of the company. The contract schedule is probably one of the best areas for a contractor to commit such fraudulent reporting.
d. Incorrect. The surety is not involved in creating or maintaining the contract schedule, although they may have significant interest.

CHAPTER 5

Solutions to Knowledge Check Questions

1.

a. Correct. Many sureties and bonding agents believe "cash is king." Many different ratios involving cash are used in determining a contractor's financial strength.
b. Incorrect. Inventory is devalued by sureties and bond agents. At most, a surety will give a contractor 50–75 percent of the contractor's inventory as credit in determining working capital.
c. Incorrect. Prepaid expenses is the least valued asset by sureties and bond agents. Typically no value is given to prepaids when determining working capital.
d. Incorrect. Although revenues are important, the cash that comes from the revenue is the key focus.

2.

a. Correct. Loans from owners may be more beneficial from a bonding perspective if the term of the debt is over a 2–3 year period of time. By doing so, the company is able to exclude the long-term portion of the debt from the working capital calculation.
b. Incorrect. Outside financing is generally the least desirable alternative. Terms for the financing are dictated by an outside party and must be appropriately disclosed. Most outside financing terms will also include a current portion which is included in current liabilities, thus having a negative effect on working capital for bonding purposes.
c. Incorrect. Loans from family members have the same impact as loans from outside financing. Even though this may be a faster avenue, the terms from family members have the same impact as traditional loan sources.
d. Incorrect. Sales of assets are generally not sustainable and therefore other sources of cash are more important.

3.

a. Incorrect. During the contract phase the contractor should be well into their cash management process. It is very important because during the project the cash flow can restrict the contractor from performing other tasks if a certain contract is not cash-flowing properly.
b. Incorrect. During the bidding phase of the contract is a great practice to determine if the contractor can cash flow not only the jobs they currently have, but also new work that is being taken on. However, the cash flow management cannot just stop there. Cash flow management must continue throughout the contract.
c. Correct. The contractor should implement the cash management process in all phases. The contractor should understand its position with other contracts prior to making the decision to bid the project in question. During the contract, it is important that a contractor ensures that a project is cash-flowing. At the end of the project, the cash management is critical in "punching" out the contract in an effort to collect retentions.
d. Incorrect. Cash management must be covered in all phases. At the end of a project is too late.

4.

a. Incorrect. At the bid, cash management looks at the contract and its ability to meet objectives and its overall impact to the company, but does not have a direct impact as it relates to actual billings.
b. Correct. Billings start at the contract. The contractor must search out favorable terms that allow the contractor to accelerate the cash flows from jobs.
c. Incorrect. Collections are important to cash management, but billings do not begin with collections. The ability to collect should be made prior to accepting a contract if the contractor is concerned with collection. Once a client is accepted, the contractor should structure the contract to provide favorable terms to allow cash to flow to the contractor upon billing.
d. Incorrect. Groundbreaking at a project is too late in the process. The contract marks the beginning of the billings process.

5.

a. Correct. The revenue recognized under percentage of completion has little to do with cash management and more to do with determining the amount of billings, contract price, and estimated costs to complete. The revenue recognized has little bearing on cash management.
b. Incorrect. The monitoring of under- and overbillings is a cash management tool. Even though the under- and overbillings figure is determined through the percentage of completion formula same as the revenue recognition, the amount of underbillings and overbillings may raise flags that affect the contractor's cash position on a particular job.
c. Incorrect. Even though the owner's presence has a big impact when on a job site, the result of improving cash flow is minimal. Strong project management is a much more cost effective approach to this issue.
d. Incorrect. The physical location of cash does not have a significant effect on cash management.

CHAPTER 6

Solutions to Knowledge Check Questions

1.

a. Correct. The demand for capital is a big need for contractors. Projects are becoming more and more expensive due to the increase of material and labor costs. Because of this a contractor's balance sheet must be larger than in the past to secure bonding for the more expensive contracts.
b. Incorrect. The prices for materials such as copper (electrical wiring) and steel have doubled in the last two years, creating higher and higher contract prices.
c. Incorrect. The construction workforce is full of challenges. You have an aging workforce that is set to retire or cut back working jobs. You have an illegal workforce that is being watched and becoming more troublesome to hire. You also have an industry that does not appeal to younger people.
d. Incorrect. The prices for materials have doubled in the last two years, creating higher and higher contract prices.

2.

a. Incorrect. Management flexibility is an advantage to forming joint ventures. Large contractors may face procedural issues that can be overlooked when performing a joint venture because the joint venture would act as an independent company.
b. Correct. The biggest hindrance to a joint venture is the loss of control. Due to a contractor's typical persona, the loss of having a "total say so" can be very difficult for a contractor to accept.
c. Incorrect. With multiple parties involved on a project the risks associated with that project may be spread amongst the different parties involved. Also, depending on the member's areas of expertise, certain risks may be significantly reduced if those risks are within the members areas of expertise.
d. Incorrect. An increased workforce is an advantage of forming joint ventures. Acquiring skilled laborers through a joint venture can help the contractor.

3.

a. Incorrect. The cost method is most appropriate when the member's ownership percentage in the joint venture is less than 20 percent or when the equity method is deemed inappropriate to use when an ownership percentage is greater than 20 percent. This scenario is not the most common.
b. Incorrect. Under the full consolidation method, the joint venture is fully consolidated with the member's financial statements. This scenario is not the most common.
c. Correct. The equity method is the most common method of accounting for investments in joint ventures by members.
d. Incorrect. The partial or proportionate consolidation method is not commonly used. However, this method is applicable to unincorporated joint ventures where joint and several liabilities exist.

CHAPTER 7

Solutions to Knowledge Check Questions

1.

a. Incorrect. A confirmation procedure is a process involving an external source to confirm a particular account, balance, or transaction with a client to meet the existence assertion of an audit.
b. Correct. This is the definition of benchmarking that provides an evaluation of a company's past performance, their present financial position, and a look at the ability to progress in the future.
c. Incorrect. Preliminary analytics are performed at the beginning of an engagement to identify variances that may point the accountant in a certain direction. Benchmarking can be used in assisting with preliminary and final analytics.
d. Incorrect. An interim review covers many areas of the financial statements and are not specific to comparing external sources.

2.

a. Correct. Leverage ratios include such ratios as debt to equity, revenue to equity, fixed asset ratio, underbillings to equity, and so on. Leverage ratios measure the company's ability to leverage off of borrowings from outside lenders or stockholders' equity.
b. Incorrect. Efficiency ratios provide the owners an indication as to certain detailed aspects of the company. They provide insight as to how well the company manages cash or demonstrates a contractor's need to seek out new work.
c. Incorrect. Profitability ratios evaluate the effectiveness of how the company uses both its assets and equity.
d. Incorrect. Liquidity ratios measure the ability to turn assets into cash, not whether the contractor is using internal or external sources.

3.

a. Correct. The use of time performance of work and performance of employees is useful for non-financial benchmarking. These benchmarks can measure the entity's amount of rework, performance standards, and quality of service. These indicators are not reflective of the profit of a company but can improve its bottom line if addressed.
b. Incorrect. Financial benchmarks use a company's financial figures and review the company's past and present performance. Such financial benchmarks can assist a company in determining the future outlook of the organization.
c. Incorrect. Efficiency ratios provide the owners an indication as to certain detailed aspects of the company. They provide insight as to how well the company manages cash or demonstrates a contractor's need to seek out new work. Efficiency ratios are part of financial benchmarks.
d. Incorrect. Liquidity ratios are a financial benchmark and measure the ability to turn assets into cash, and are not related to efficiency.

CHAPTER 8

Solutions to Knowledge Check Questions

1.

a. Incorrect. Contractors understand their direct costs. They understand this because the charging of specific invoices and certain time sheets is straightforward.
b. Correct. The indirect costs give contractors most of their problems when considering job costs. This is because these costs are attributable to various jobs in progress at the same time. Without giving any consideration to the indirect job costs, the contractor is only getting part of the picture.
c. Incorrect. Subcontract costs are a part of direct costs. Subcontract costs are typically put out for bid and lock the subcontractor into a stated price with little difficulty for the estimator.
d. Incorrect. Labor costs are a part of direct costs. Similar to subcontract costs, labor costs are typically put out for bid and lock the subcontractor into a stated price with little difficulty for the estimator.

2.

a. Correct. An equipment cost pool uses designated general ledger accounts to capture the costs incurred on a company's equipment. The company determines a rate charged out on certain pieces of equipment and charges it to a contra-expense within the equipment cost pool. The contractor can then evaluate the under- or over-application of its job cost rates to the individual jobs.
b. Incorrect. The shotgun approach is a guess by the contractor in allocation of costs. The shotgun approach can be used if all jobs are completed and costs are unallocated to the job. This method is very ineffective and does not assist the contractor in estimating the next project.
c. Incorrect. The 10 and 10 approach is a general approach that indicates 10 percent for overhead and 10 percent for profit. There is no basis for why a contractor uses this approach.
d. Incorrect. Equipment costs should be pooled and charged to individual contracts.

3.

a. Correct. General conditions and job overhead are the indirect costs that are allocable to individual contracts. These costs are considered indirect costs that should be allocated in some method to individual jobs to properly report a project's gross profit.
b. Incorrect. Direct labor costs are those costs incurred by labor working directly on the job. These costs should be easy to identify and capture with employee time cards and or timesheets.
c. Incorrect. Selling general and administrative costs are not reasonably allocated to either individual contracts or individual tasks within contracts.
d. Incorrect. Direct material costs are those costs incurred by materials on a particular job. These costs should be easy to identify and capture with invoices and material inventory.

4.

a. Incorrect. Overhead allocation is taking a cost approach of allocating overhead costs based on some denominator to the individual contract.
b. Correct. Break-even analysis may be used to determine what level of contracts the contractor needs to obtain based on his general and administrative costs. If the contractor has made significant gains in covering its overhead for the year, the contract can assess its needs in increasing or decreasing overhead cost projections when submitting bids.
c. Incorrect. Backlog is the amount of work a contractor has on hand that may be both in progress jobs and contracts that have been awarded but not started.
d. Incorrect. Work-in-process, similar to backlog, is the amount of work a contractor currently has underway.

CHAPTER 9

Solutions to Knowledge Check Questions

1.

a. Correct. Both studies revealed many characteristics of the organization of a construction company and characteristics of how construction companies are operated.
b. Incorrect. Contractors cannot be considered low risk based on their common structure and other factors. Studies have indicated poor planning, poor marketing, and poor management commonly lead to business failures. Signs of troubled companies included family and closely held businesses, companies lacking a proprietary product, highly leveraged, and other factors were potential signs.
c. Incorrect. Contractors are high risk based on the studies' findings. U.S. Bank indicated poor planning, poor marketing, and poor management led to business failures. TMA indicated family and closely held businesses, companies lacking a proprietary product, highly leveraged, and other factors were signs of potential troubled companies. All these are likened to the construction industry.
d. Incorrect. Risk is a significant consideration. Contractors are considered high risk.

2.

a. Correct. The willingness to change is very important. Management must be willing to admit that what they have been doing in the past has not worked and change must be implemented.
b. Incorrect. When a contractor becomes financially troubled, their financial statements are not in the best presentable situation. Because of this, the contractor must work with its suppliers, surety, and financial institution to help turn around the contractor.
c. Incorrect. The fact that personal assets are available to assist the contractor's current situation is not a long-term solution. The manner in which the business is being run will need to change.
d. Incorrect. Having the assets to effect change is important, but without the will to change, change will not be possible.

3.

a. Incorrect. A turnaround plan is not going to work in any short time frame. This is not to say that it cannot happen, but the timing of the plan is not a key to success; however, a successful plan can result in it being completed within twelve months.
b. Correct. Management must make itself accountable to the plan. By developing a "report card" of the company's stated goals throughout the process, management will identify the company's progress to success.
c. Incorrect. An audit will just provide reasonable assurance as to the balances of the financial statements. The audit will not provide any assistance in making a turnaround plan successful.
d. Incorrect. Involving an outside party to consult may be beneficial; however, management is ultimately responsible and must make itself accountable.

CHAPTER 10

Solutions to Knowledge Check Questions

1.

a. Incorrect. Short-term jobs are usually not risky from a timing and scheduling perspective. Jobs that stretch out over a long time frame are generally riskier.
b. Incorrect. Timing and scheduling is less risky on a cost plus contract because you bill when costs are incurred. The contractor is not subject to down time.
c. Correct. Jobs that stretch out over a long time frame are generally riskier. The auditor should also ask the client about jobs that are behind schedule or that are under an accelerated schedule with the owner pushing to get the work done. These are generally riskier, too.
d. Incorrect. Jobs that are behind schedule are generally riskier. On schedule jobs have a lower risk.

2.

a. Incorrect. The unapproved change order does not become a new contract because the owner does not believe the work performed was in the guidelines of the original contract. The amount becomes a dispute.
b. Correct. The unapproved change order evolves into a claim. In order to recognize revenues associated with a claim, the contractor must be able to demonstrate that the claim will result in additional contract revenue and that the amount can be reliably estimated.
c. Incorrect. A back charge is when a contractor has performed work that another party was responsible for. The work was designed to be performed. The contractor that performed the work can back charge the contractor that failed to do the work.
d. Incorrect. The unapproved change order evolves into a claim and the contractor can recognize revenue under certain conditions.

3.

a. Incorrect. Developing an independent expectation is an accepted audit procedure. However, when auditing a construction contract, it is the author's opinion that the CPA lacks the ability to develop an independent expectation of how the contract is going to complete.
b. Correct. By reviewing and testing the process that management performs in determining the costs incurred to date and the remaining costs to be incurred, the accountant can become comfortable with the estimating process.
c. Incorrect. Performing substantive testing on the costs incurred to date is an effective procedures in testing the controls that are in place. However, costs incurred to date is just one part of the percentage of completion formula. You still have significant estimates that are involved.
d. Incorrect. While reviewing prior estimates may be helpful, reviewing and testing the process that management performs in determining the costs incurred to date and the remaining costs to be incurred, is the better procedure.

4.

a. Incorrect. While the receivables and unrecorded payables are important, these must be established and reasonable in material respect during the audit regardless of going concern issues.
b. Correct. In assessing the ability to continue as a going concern, the auditor may look to the gross profit remaining to be earned from the uncompleted contract schedule and the amount of signed backlog the contractor has on hand. When compared to the fixed overhead of the contractor, the auditor can determine whether the contractor can meet its fixed obligations over the next year with just the work on hand and signed backlog.
c. Incorrect. The bonded jobs are not as significant because the surety will step in to assure the project owner that the contract will be completed. The fact that the contractor has bonded jobs will not deter the contractor from being considered a going concern.
d. Incorrect. While estimated new work can indicate that the contractor has work on the horizon, gross profit remaining to be earned from the uncompleted contract schedule and the amount of signed backlog the contractor has on hand, gives more comfort that the contractor will be viable long enough to begin that work.

CHAPTER 11

Solutions to Knowledge Check Questions

1.

a. Incorrect. Permanent differences include irreversible differences such as officers' life insurance premiums, 50 percent of meals and entertainment and penalties.
b. Incorrect. Reportable conditions have nothing to do with the determination of deferred income taxes unless the process in determining tax difference is poorly established.
c. Correct. The difference is revenue recognition for GAAP and tax is a reversible difference. Any income tax deferral in the current year must be reversed and included in income in the subsequent year.
d. Incorrect. There are differences that reverse between GAAP reporting and taxable income. They are temporary differences.

2.

a. Correct. OSHA penalties are deemed penalties that should be considered a permanent difference.
b. Incorrect. Losses on uncompleted contracts are a liability required by GAAP that must be recorded in the year such a loss is determined. This loss is not deductible per Code section 460.
c. Incorrect. The 10 percent deferral method does not account for jobs that are less than 10 percent complete in the current year for tax purposes. The jobs effected in the current year should become more complete in the subsequent year giving rise to a temporary difference.
d. Incorrect. Fixed assets can have different depreciable lives for book purposes versus tax purposes. The differences are temporary in nature.

CHAPTER 12

Solutions to Knowledge Check Questions

1.

a. Correct. Alternative minimum taxes apply to all non-C corporation taxpayers and C-corporations that exceed certain revenue levels. The alternative minimum tax requires the contractor to make, in addition to other adjustments, an adjustment for the long-term contract deferral.
b. Incorrect. Code section 460 allows different methods to be used under the small contractor exemption.
c. Incorrect. Bonus depreciation issues are important to the contractor, but the bonus depreciation issues do not have an impact on the method the contractor reports income under the small contractor exemption allowed by section 460.
d. Incorrect. There aren't special rules for dues and subscriptions for contractors. Instead, they should be aware of AMT implications.

2.

a. Incorrect. The election of percentage of completion is not the best recommendation for the contractor. Yes, the election would nearly eliminate them from AMT considerations; however, such an election would accelerate the contractor in paying regular income tax accordingly.
b. Correct. By controlling subcontractor front loading, the contractor can control the cost incurred to date on the particular contract subject to AMT. By doing this, the contractor is lowering the cost incurred to date, thereby lowering the profit recognized on the job under the percentage of completion calculation. By doing this, the contractor lowers the AMT amount due.
c. Incorrect. Depreciation methods do give rise to AMT preference items but the election to change depreciation methods is a complicated and expensive suggestion.
d. Incorrect. Larger revenues often translate to larger taxable income. Controlling subcontractor front loading is a better method to minimize AMT.

3.

a. Incorrect. The simplified cost method excludes direct labor (and burden), direct materials (including subcontractors) and depreciation equipment for the contract at hand. It has nothing to do with retainages.
b. Correct. The contractor may consider reducing the treatment of retentions payable as long as it reduces retainage receivable. The retainage receivable has no effect on the percentage of completion formula. The contractor's position would be that the retentions cannot be included because all the events have not occurred to fix the liability and the amount is not determinable.
c. Incorrect. The 10 percent deferral method allows contracts that are less than 10 percent complete to be deferred to the subsequent year. It has nothing to do with including or excluding retainage receivable because they must both be included when determining the percent complete for tax purposes.
d. Incorrect. There is not a FIFO test related to contracts in progress. The all events and economic performance test helps minimize AMT.

CHAPTER 13

Solutions to Knowledge Check Questions

1.

a. Incorrect. The look-back method requires the taxpayer to review the under- or over-reporting of differences resulting from jobs not completed across taxable years. Once the contractor has determined the inherent difference of the under- or over-reported income, the taxpayer must determine the tax liability the taxpayer would have incurred if the estimates would have been 100 percent accurate. Such a calculation may result in an overpayment by the taxpayer and result in a refund from inaccurate estimates. Once the potential tax liability or refund is determined, the taxpayer must then determine the interest that would be due or receivable on the tax. Such information is filed on the IRS Form 8697. This form is due at the same time as the taxpayers' income tax return. The fact that the contract expands the taxable year makes it a long term contract and must be considered.

b. Correct. If a contract is started and completed during the same taxable year, an estimate of the contract income is not needed because the contract is complete. The purpose of the look-back method is to determine the under- or over-reporting of differences resulting from jobs not completed across taxable years because estimates must be used

c. Incorrect. The look-back method requires the taxpayer to review the under- or over-reporting of differences resulting from jobs not completed across taxable years. Once the contractor has determined the inherent difference of the under- or over-reported income, the taxpayer must determine the tax liability the taxpayer would have incurred if the estimates would have been 100 percent accurate. Such a calculation may result in an overpayment by the taxpayer and result in a refund from inaccurate estimates. Once the potential tax liability or refund is determined, the taxpayer must then determine the interest that would be due or receivable on the tax. Such information is filed on the IRS Form 8697. This form is due at the same time as the taxpayers' income tax return.

d. Incorrect. A long-term contract subject to the percentage of completion method is required to use the look-back method.

2.

a. Correct. The de minimis election allows this. The election is automatic and must be made with an affirmative statement on the return.

b. Incorrect. The de minimis exception of the contracts does not require look-back if the gross price of the contract does not exceed the lesser of $1,000,000 *or* 1 percent of the average annual gross receipts of the taxpayer for the three taxable years preceding the taxable year in which the contract was completed.

c. Incorrect. The 10 percent deferral method is electing to defer gross profit on contracts that are less than 10 percent complete for tax purposes.

d. Incorrect. There is not a related party method. The *de minimis* election allows the taxpayer to exclude any contract where the cumulative taxable income generated from the individual contract is within 10 percent of the cumulative look-back income for each prior year in which the look-back is determined.

CHAPTER 14

Solutions to Knowledge Check Questions

1.

a. Incorrect. This is typically discussed at the time of tax planning; however, the question focuses on the construction company and not ownership.
b. Correct. It is key that we do not tax plan our contractor client out of the ability to bond future work.
c. Incorrect. Officer compensation is an after tax matter. Maintaining a strong financial statement after tax strategies are determined will lead to future success of the company.
d. Incorrect. Succession planning is something to consider in a closely held business but not an immediate tax planning idea.

2.

a. Incorrect. The ability to pay income taxes is important to the practitioner; however, the concern is being aware as to the future bonding ability of the company as a result of tax planning implications.
b. Correct. We do not want to implement tax saving strategies that will harm the financial position of the contractor for future bonding purposes
c. Incorrect. The amount of taxes the contractor paid in previous years does not have any bearing on the contractor for the current year.
d. Incorrect. Personal property taxes do not impact tax planning for the contractor's business.

3.

a. Incorrect. As part of the tax planning process, the remaining net operating loss carryforwards should be reviewed for offset on current taxable income.
b. Incorrect. Because the contractor's long term contract adjustments are automatic due to the contractor's previous election they must be determined in the planning process. When determining the impact of the long-term contract items, the CPA must not forget about the ramifications of the alternative minimum tax on such long term contract preference items. The CPAs omission of considering the AMT impact will eliminate any benefits offered by the CPAs tax planning.
c. Correct. The expenditures for meals and entertainment cannot be reversed nor is it usually a significant tax planning step.
d. Incorrect. As part of tax planning, fixed assets and their lives should be analyzed for opportunities to accelerate tax deductions.

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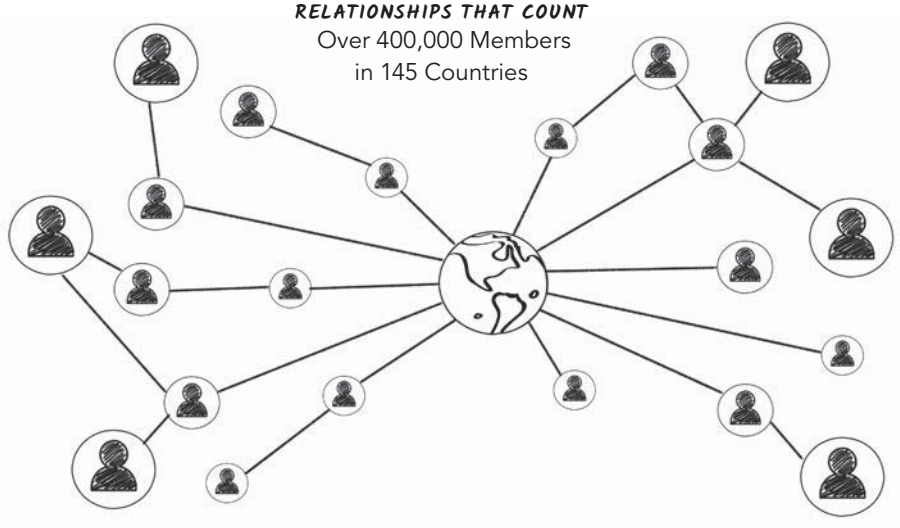

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