

[FindArticles](#) > [Internal Auditor](#) > [Feb, 1999](#) > [Article](#) > [Print friendly](#)

Construction contract auditing - includes related articles

James D. Cashell

In some organizations, cost recoveries from contract audits exceed the entire annual budget for the internal audit department; but a new study shows that a significant percentage of auditors aren't even involved in this best practice arena. What's wrong with this picture?

Effective audits of construction contracts can be dramatic testimonials to the value of internal auditing. Third party contracts for building facilities or equipment generally involve large dollar amounts and complex agreements, and they extend over a substantial period of time. Monitoring the contract to be sure that the company has not been overcharged and that all services due have been received can represent huge savings.

In addition, the scope of construction contract audits can be expanded to include an evaluation of the appropriateness and quality of the project. That is, internal auditors might assume responsibility for assessing the effectiveness of the project design and any changes made to it. Furthermore, since construction contract audits add value without placing the internal auditor in the stereotypical role of corporate watchdog, they can also be one of internal auditing's most compelling image enhancers within the company.

Unfortunately, findings from a study of U.S. companies indicate that many internal auditors may not be taking full advantage of the opportunities presented by construction contract auditing. While 75 percent of responding internal auditors work for companies that regularly enter into construction contracts, a full 37 percent do not audit these contracts. In those organizations where internal auditors don't audit the agreements, 48 percent reported not knowing who, or whether anyone, in the organization is responsible for overseeing contracts. Of those who do audit contracts, most audit fewer than half, and only 11 percent audit 75 percent or more.

Given the potential benefits of construction contract auditing, these results are likely to be surprising to

astute practitioners. Obviously, many organizations are not adequately auditing their construction contracts. A closer look at how survey respondents approach this best practice area may help internal audit staffs beef up their construction audit efforts.

AUDIT APPROACHES

Of the 63 percent of respondents who do conduct audits, 79 percent demand that all agreements include audit clauses requiring contractors to submit to an audit. The approaches to contract audits taken by internal audit departments vary from one organization to another.

ALLOCATING RESOURCES

Sixty-eight percent indicated that they devote less than 10 percent of their annual audit efforts to contract audits. Another 24 percent claimed to spend between 10 and 20 percent; and only six percent said they spent more than 20 percent.

ASSIGNING AUDITORS

In 31 percent of companies, a dedicated set of auditors conduct construction contract reviews. The remainder of respondents indicated that anyone on the internal audit staff might be assigned to such audits. However, 90 percent of the respondents indicated that auditors assigned to such engagements, whether dedicated or not, receive some kind of specialized training in construction contract auditing, usually through seminars or working with experienced persons.

DETERMINING AUDIT COVERAGE

Most respondents indicated that they employ multi-scope audits. Ninety-seven percent reported that their audit scope includes verifying that the payments to the contractor agree with the contract terms. Seventy-nine percent include an audit of the organizational division that entered into the contract to see whether or not it was authorized to enter into the contract and if it possesses the capability to monitor the project.

Sixty-nine percent include an audit of the contractor's own records to verify the propriety of costs charged on the contract. All of the organizations with a dedicated set of contract auditors reported that they include an audit of the contractor's records as part of their audit scope; and all of the organizations that routinely perform an audit of the contractor's records as part of their audit scope require an audit clause in their

contracts.

Finally, two of the respondents indicated that their audit scopes include verifying that the completed work meets contract specifications. One of these respondents indicated that for this aspect of the audit scope, the organization employs technical auditors, who are engineers trained in auditing procedures.

MEASURING AUDIT EFFECTIVENESS

Respondents identified the following primary measures used to judge the internal audit department's effectiveness on construction contract audits. The percentages in parentheses represent the number of respondents who cited each measure:

- * The annual number of contracts audited (59 percent).
- * The dollar return per audit (52 percent).
- * Internal control recommendations stemming from the audit (15 percent).

Several auditors reported that their organizations relied on more than one measure, which accounts for the fact that the percentages total more than 100 percent.

FINDINGS

Most auditors participating in the study reported finding significant overcharges during their audits. Twenty-eight percent found significant overcharges on 1-24 percent of their audits; 38 percent did so on 25-49 percent of audits; and 17 percent did on 50-99 percent of audits. Only seven percent indicated finding significant overcharges on all of their audits. Interestingly, all of the auditors who reported finding overcharges on every audit included an audit of the contractor's own records in their audit scope.

While 10 percent of the responding auditors indicated that they never find significant overcharges during construction audits, many qualified their responses. For example, several claimed that searching for overcharges was beyond the scope of their audit. Others noted that their audit work focuses on the early stages of the project, thereby preventing overcharges from occurring.

The most frequently cited findings, with percentage of responses in brackets, included:

- * Charges for costs that were never incurred (48 percent).
- * Inclusion of non-allowable costs in the target cost (45 percent).
- * Failure to give credit for original contract costs revised by change orders (38 percent).
- * Inflated burden rates (17 percent).
- * Duplicate charges (14 percent).

Other less frequently cited findings included:

- * Failure to give credit for rebates or construction bond deposits.
- * Equipment or material not meeting specifications.
- * Impairment of auditability due to inadequate record-keeping by construction vendor.
- * Contractor's failure to secure proper lien releases.

When the respondents were asked if their findings from construction contract audits typically covered their audit costs, 63 percent indicated that they did. Additionally, two respondents noted that their cost recovery from such audits typically exceeded the entire annual budget for their respective internal audit departments. In both of these organizations, the internal audit department devoted less than 15 percent of its annual budget to performing construction contract audits.

BEST PRACTICES

Separate interviews with auditors from seven of the responding companies disclosed both common and uncommon practices that they considered important in construction contract auditing:

1 USE ADEQUATELY TRAINED AUDITORS. Most respondents indicated that their construction auditors receive specific education, which usually involves seminars and on-the-job training with experienced contract auditors. Internal auditors at one of the companies indicated that they include the key

members of the project team in their contract audit training, and that the project manager serves as part of the audit team.

Another company includes a "technical auditor," an engineer with audit training, on each construction audit. The technical auditor is responsible for auditing both the financial and technical aspects of the contract. According to the interviewee, the use of technical auditors has provided significant benefits.

2 WRITE CONTRACTS THAT PREVENT PROBLEMS. All interviewees emphasized the importance of writing a good contract and recommended that internal auditors be involved during the drafting of the contract. They claimed to have eliminated many typical construction project issues through clearly written contracts that anticipated and addressed potential problems.

At a minimum, interviewees noted that the contract should contain an audit clause requiring the contractor to submit to an audit and should address change orders. Three of the interviewees claimed their respective companies include an audit clause for subcontractors. One even noted that his company's contracts specifically identify who can and cannot serve as a subcontractor and outline specific requirements for subcontractors.

Some interviewees suggested that, when necessary, the audit clause provision should define the contractor's record keeping and reporting requirements. They pointed out that without such requirements, obtaining the records necessary to conduct a proper audit may be a difficult process.

Other specific recommendations for writing an effective contract include:

- * Require all change orders to be in writing. Several respondents had, at some point, experienced costly disagreements with contractors over the terms of verbal change orders. All of the interviewees underscored change orders as a problem area and a critical risk on construction projects. Change orders and specific details about how they will be costed should be specified in writing.

- * Specify how savings from value engineering will be shared. One interviewee noted that his company requires specific contract provisions regarding value engineering on lumpsum contracts. Value engineering involves alternative technology designed to reduce costs without affecting the quality and functionality of the project. Contract terms related to value engineering explain how the resulting savings will be divided between the contractor and the company. Without such a provision the contractor is likely

to be the only beneficiary.

* Require that the company, not the contractor, pays sales taxes. One of the auditors interviewed in the study indicated that his company always requires that sales taxes be paid by the company, rather than by the contractor. The rationale is that the company usually has a better understanding of its sales tax liability and can, therefore, significantly reduce sales tax costs. The contractor may not have an equal incentive to reduce such costs. Since incorporating this policy, the company has reaped significant savings.

3 USE QUALIFIED TEAMS AND ASSIGN INDIVIDUAL RESPONSIBILITIES. All of the interviewed auditors recognized the importance of effective project teams, especially the project accountant, in ensuring project control and success. Everyone noted that internal audit efforts can accomplish only so much and that it requires the day-to-day efforts of the project team to ensure compliance with the contract terms and propriety of contract costs.

Nonetheless, internal auditors do have a role to play when it comes to project teams. For example, they can help assure the quality of the team by reviewing the qualifications and work of team members.

Internal auditors' most important role in this area may involve ensuring proper communications among the group. Project team communication is critical, and all team members should know that responsibility for maintaining effective communication extends to everyone involved with the project. One of the internal auditors noted that his department facilitates communication among the project team, the contractor, the company lawyers, and engineers. He claimed that this helped with prevention or early detection of many potential problems on the project. Internal auditors should confirm that responsibility for each aspect of the project is assigned to a member of the project team and that each person knows his or her specific responsibilities. Respondents observed that, in many cases, everyone on the project team thinks someone else is monitoring the problem area.

One of the interviewees indicated that his company includes the project manager as part of the contract audit team. The effectiveness and efficiency of the audit can be heightened by including someone with an intimate knowledge of the project. In addition, the internal auditors' relationship with the project team can be enhanced. "The name of the game is to make the project manager look good even if there are subsequent recoveries from the contract," noted the respondent. Including the project manager on the audit team allows project managers to escape embarrassment by being participants in finding the recoveries, as opposed to appearing to be the person who failed to prevent the problem during the project. It also helps to

emphasize that the audit is focused on the outside entity and not on the manager.

4 PERFORM AUDIT WORK EARLY. All of the auditors recommended audit involvement early in the project, noting that this practice helps to prevent headaches before they occur and detect problems while they can still be remedied without costly fights. One auditor noted that contractors can usually be persuaded to accept audit findings that are not too costly; but resolving costly findings often requires litigation.

A unique early involvement approach employed by one of the interviewees is to give the contractor an "exception list" at the beginning of the project. This exception list consists of the 20 most significant discrepancies and problems found on previous construction projects. The list is discussed with the contractor prior to the project to enhance awareness of these potential problems so they can be avoided. The interviewee noted that this practice has produced rewarding results.

5 SHARE EXPERIENCES WITH OTHER AUDITORS. Most of the interviewed auditors indicated an interest in exchanging information with auditors at other companies, and all said they do share general information about their experiences when opportunities are presented. There was also an expressed interest in expanding such opportunities beyond professional meetings. One suggestion was to develop communication groups of about six auditors from different companies so the auditors could become even more comfortable in communicating with each other.

When asked if they would ever share information about a specific contractor when fraud was found, auditors from two of the companies indicated a reluctant willingness to do so. Both, however, noted the confidentiality issues involved and indicated that any such communication would have to be cryptic. That is, the communication would not specifically identify the contractor but would provide sufficient clues so that a careful listener could figure it out.

EXPERIENCE AND INSIGHTS

All of the interviewed auditors believe that their construction contract audits provide a valuable service to their companies. One auditor reported a 263 percent return per audit dollar.

In addition, all are convinced that their efforts result in significant cost avoidance. Prevention and early detection strategies have helped internal auditors at all five active companies to reduce the number of

significant findings by preventing many problems from ever occurring. One interviewee noted that his department, rather than boasting about recovering a million dollars, takes pride in preventing such findings.

Interviewees also confirmed that construction contract audits enhance the esteem of internal auditors within their companies. As one interviewee noted, the fact that the project team requests internal auditor presence during their contracting process is a clear indication that their services are regarded as valuable.

All of the interviewed auditors indicated that construction projects pose significant risks. Two respondents indicated they typically experience an error rate on construction contracts that is much higher than on other types of audits.

Poorly written contracts pose another problem experienced by most of the interviewees at some point. "Gray areas" involving significant dollars, where it is not clear whether the company or the contractor is responsible for the cost, are frequent occurrences; and in most cases, the company is the loser. Hence, the practice of writing clear and detailed contracts is emphasized.

Some respondents cited difficulty in conducting the audit as a key hurdle. Auditees are often uncooperative, and the condition of contractor records can be less than desirable. Short of litigation, it is difficult to appeal to a higher authority to force cooperation. All of the auditors indicated that while the audit clause in the contract is necessary and helpful, it does not guarantee a warm welcome.

A WAKE-UP CALL

Audits of construction contracts can produce significant savings, and internal audit departments should be performing audits on all construction contracts. Outsourcing such audits may also be an option. The benefits cannot be overlooked; and internal auditors have the training and experience to help their organizations reap immediate rewards.

About the Survey

Researchers sent initial surveys to internal auditors at more than 200 different organizations across the u.s. Internal auditors from 61 of the organizations participated. The second part of the research focused on interviews with seven companies. Five of the companies have been heavily involved with contract auditing for several years, and the remaining two are in the early stages of such audits. Many of the best practices, experiences, and insights gleaned from this study were provided by the five companies with the

most extensive histories of contract auditing.

RELATED ARTICLE: Basic Types of Construction Contracts

LUMP-SUM CONTRACTS

In lump-sum contracts, the cost of the project is fixed; the profit is the fixed contract amount less the contractor's costs. The advantage of lump-sum contracts is that the cost of the project is known up front. The disadvantage is that alterations to the original contract, such as change orders, could be expensive.

AUDIT ISSUES

- * The contractor may cut corners on contract specifications by utilizing lower quality material, lower skill level employees, and inferior construction techniques.
- * The contractor may charge unreasonable amounts for change orders.
- * The contractor may fail to give credit for original contract work replaced by change orders.
- * The contractor may fail to maintain performance bonds and insurance coverage throughout the project; for example, insurance coverage might be dropped shortly after the project begins.
- * The contractor may fail to give credit for costs included in the contract price that are directly paid by the company.
- * Allowances may not be properly adjusted.

COST-PLUS CONTRACTS

In a cost-plus contract, the cost of the project is typically determined by multiplying the direct costs actually incurred on the project by some specified percentage, often referred to as the "overhead rate." The contractor's profit is built into the overhead rate.

The advantages of cost-plus contracts are that the contractor needs to disclose all costs incurred on the project and that change orders are usually costed the same way as the rest of the project. The primary

disadvantage is that the contractor does not have a vested interest in controlling costs, since higher costs mean higher profits.

AUDIT ISSUES

- * The contractor may double-charge by including overhead or other improper costs in the direct cost base for the project. For example, the contractor might include administrative costs as part of the contract cost when such costs are also built into the "plus" or overhead rate.
- * Unscrupulous contractors may unnecessarily inflate project costs by using higher cost labor or materials, failing to use competitive bidding for subcontractors, or by neglecting to give proper credit for discounts or refundable deposits.
- * The contractor may charge for costs not incurred on the project, such as materials that were purchased but not used.
- * Contractors may inflate equipment costs by charging excess rental rates on equipment they own, by keeping equipment on site longer than it is needed, or by double-charging one piece of equipment that is used on two different contracts related to the same job.

TIME AND MATERIALS CONTRACTS

Time and materials contracts are similar to cost-plus contracts. The cost of the time and materials project is determined by the actual cost of direct materials used plus some additional amount based on the labor used. The time, or labor-related charge, of the contract cost is typically derived by multiplying a labor burden rate by the actual direct labor cost or the actual direct labor hours charged to the project. The contractor's profit is built into the labor burden rate.

Like the cost-plus contract, time and materials contracts require the contractor to disclose costs incurred on the project, and change orders are usually costed the same way as the rest of the project. The main disadvantage, again, is that the contractor does not have a vested interest in controlling costs, since higher costs mean higher profits,

AUDIT ISSUES

* All the audit issues related to inflated or improper material charges with the cost-plus contract must also be considered with time and materials contracts.

* The contractor may inflate the direct labor base used to compute the time portion of the contract cost by improperly including overhead personnel labor or fringe benefits such as vacation and sick time in the base, or by including labor-related items such as relocation costs.

* If the time portion of the contract cost is based on actual direct labor hours incurred on the project, the contractor may inflate the base by using less skilled labor, by including overhead personnel labor hours in the base, or by employing direct labor inefficiently.

RELATED ARTICLE: A Call for Action

The need for internal auditors to audit construction contracts cannot be denied. Seventy-five percent of organizations represented in the survey enter into construction contracts on a regular basis; thirty percent of those handle 10 or more contracts a year. In addition, all of the respondents reported that at least some of their contracts involve change orders. Such numbers underscore the significant contract exposures that organizations may face. Yet, almost one-third of organizations that enter into so or more contracts a year do not call on internal auditors to help control these projects.

AVERAGE NUMBER OF CONSTRUCTION CONTRACTS PER YEAR

# of Contracts	% of Respondents
0	24.8%
1	15.6
2-5	19.8
5-10	10.0
[greater than]10	29.8

AVERAGE PERCENTAGE OF CONTRACTS INVOLVING CHANGE ORDERS

% of Contracts	% of Respondents
----------------	------------------

0%	0.0%
1-24	10.3
25-49	10.3
50-74	20.7
75-99	34.5
100	24.2

RELATIONSHIP BETWEEN THE AVERAGE NUMBER OF ANNUAL CONSTRUCTION
CONTRACTS AND THE PERCENTAGE OF INTERNAL AUDIT SHOPS
PERFORMING CONSTRUCTION AUDITS

Avg. # of Contracts	% of Orgs. That Use IA
2-5	58
5-10	67
[greater than]10	72

JAMES D. CASHELL, CPA, MBA, PHD, is Professor of Accountancy at Miami University in Oxford, Ohio. He can be reached via e-mail at casheljd@muohio.edu.

GEORGE R. ALDHIZER, III, CPA, PHD, is Assistant Professor of Accountancy at Northern Kentucky University in Highland Heights, Kentucky. He can be reached via e-mail at aldhizer@nku.edu.

RICK EICHMANN, CIA, is a Contract Auditor for Cinergy Corporation in Cincinnati, Ohio. He can be reached via e-mail at ricketaudit@aol.com.

COPYRIGHT 1999 Institute of Internal Auditors, Inc.

COPYRIGHT 2004 Gale Group