Construction auditing:
Continuous monitoring of active construction projects
Introductions

Webinar Moderator
Mary Barnett
ACUA President
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We will be recording today.
Introductions

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Overview

Today’s topics

- Construction lifecycle
- Owner’s responsibilities
- Pros and cons of continuous monitoring
- Selecting projects for audit
- Construction audit program development
Learning objectives

1) Recognize when to continuously monitor a construction project
2) Identify gaps in the owner’s current construction activities and responsibilities
3) Perform procedures to assess construction work in progress and adherence to compliance requirements.
   a) Change orders
   b) Progress reporting
   c) Project controls
   d) Contract accounting
4) Evaluate how Internal Audit can participate most effectively in continuous monitoring activities while maintaining a collaborative work environment
5) Develop a continuous monitoring audit program
Construction lifecycle

Traditional Linear Process

- **Planning**
  - Owner provides money, space, and contracts
  - Owner recognizes need and conceives idea

- **Design**
  - A/E provides design and CDs

- **Bid**
  - Owner selects or awards contract

- **Construction**
  - Contractor builds, owner pays

- **Occupancy**
  - Owner accepts and occupies facility

Fast-Tracking Process

- **Planning**
  - Owner provides money, space, and contracts
  - Owner recognizes need and conceives idea

- **Design**
  - A/E provides design and CDs

- **Construction**
  - Contractor builds, owner pays

- **Occupancy**
  - Owner accepts and occupies facility

*Architect/Engineer (A/E)*
Construction project lifecycle

Construction progress to date

- Design and construction team has been selected (Facilities)
- Contracts have been executed (Legal)
- Groundbreaking ceremony is complete
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Previously discussed:
Preconstruction activities (prevention)

- Contractor due diligence
- Contracting and negotiation
- Contract risk matrix development
Owner’s responsibilities (cont.)

During the construction phase

> Controlling capital expenditures
> Monitoring change orders
> Scheduling thousands of activities for hundreds of people
> Maintaining an ethical and safe work environment
Common construction risk management myths

> Our architect is reviewing and approving pay applications
> If the architect approved the change order it must be okay
> We have a shared savings provision, our contractor has incentive to minimize project costs
Pros and cons of continuous monitoring

Pros

> Early detection of non-compliance items
> Prevention of abusive behaviors
> Minimize the “I forgot” and lost document syndrome
> Higher return on investment
  – Typically three percent or more of the construction costs
Pros and cons of continuous monitoring (cont.)

Cons

> Can require more time of internal audit professionals
> Difficult to document and calculate the value of prevention
> Requires greater subject matter knowledge
T.H.E.S.E. attributes should be considered when evaluating projects for audit

T –
H –
E –
S –
E –
How to budget and pay for the construction audit

Rules of thumb to follow

Audit hours equal .001% times the construction cost.

> For instance, a $50 million project should have 500 audit hours
> This assumes an experienced team, moderate construction schedule and an average building
How to budget and pay for the construction audit (cont.)

Rules of thumb to follow (cont.)

The cost of the construction audit is a real construction cost like project management, engineering services and construction materials.

Options to pay for the construction audit:

> Capitalize the cost with other construction costs
> Charge back to facilities management
> Special budget resource request to fund the construction audit as a special project
> Part of annual internal audit budget
Key risks

> Overcharging for labor and materials
> Over priced change orders
> Charges for re-work
> Lost incentives and credits
> Failure to deliver contracted scope
> Charges for non-allowable costs
Construction audit program fundamentals

> Document and analyze construction process controls
> Test financial controls for weakness and/or compliance
> Reconcile contractor’s cost calculations
> Verify contractor’s cost calculations with contract terms
> Recommend financial control improvements
> Validate continued testing with cost/benefit analysis
> Tailor test programs to focus efforts on highest and most exposed construction financial risks
Audit program

- Preparation of control schedules
- Reconcile project expenditures
- Direct labor analysis
- Labor burden analysis
- Change order analysis and pricing analysis
- Subcontract analysis
- Material purchases
- Verification of contracted scope
- Equipment rental analysis
- Bonds and insurance analysis
- Quality assurance and quality control
Preparation of control schedules

> Contractor’s applications for payment
> Owner’s project payments
> Pay application back up documentation
> Contractor’s costs by major construction phase
> RFIs and scope changes
Reconciliation of project expenditures

> Obtain all project related financial or accounting transactions that document owner expenditures
> Reconcile the sum of the total payments made to each vendor to the various contract amounts as adjusted by change orders
> Review itemized payments made to each vendor for each project and vouch a sample of vendor payments to canceled checks other support
> Review a sample of invoices paid direct by the owner for services, materials or other costs which may have been the responsibility of the general contractor
Direct labor analysis

> Obtain payroll registers and certified payroll information
> Audit for activity which may not be legitimate reimbursable costs
> Compare independent records of activity at the job site to the payroll charges
> Determine whether or not personnel charged to the job may have been working for subcontractors or affiliates without appropriate back charges
> Trace payroll charges to the contractor’s payroll register
> Reconcile payroll registers
> Verify allocation of payroll costs
Labor burden analysis

> Decompose the labor burden and determine the basis for the contractor's charges for payroll taxes, insurance, and fringe. Audit for activity which may not be legitimate reimbursable costs.

> Determine that the contractor's charges for FICA, FUTA, WC, and SUTA are appropriate.

> Review other components of contractor's labor burden charges for appropriate methodology in application Trace payroll charges to the contractor’s payroll register.

> Decompose the union benefits charges and separate from labor burden charges.
Change order analysis

> Prepare a control schedule of owner change orders
> Review the detailed change order backup documentation
> Perform recalculation of change orders
> Verify labor and labor burden pricing for change orders
> Verify appropriateness of change order material pricing, material quantity take-offs, labor productivity factors, and related extensions
> Review change order for errors
Change order pricing analysis

> Ensure the change order represents a legitimate change in scope
> Review for possible deletions or partial deletions or changes in scope
> Determine whether or not any owner provided items might have been used
> Review for proper application of sales taxes
> Verify that contractor does not participate in subcontractor buy-outs of inflated change order price proposals
Subcontracts

> Prepare a control schedule of all base subcontract and subcontract change orders
> Review all change orders issued to subcontractors
> Balance paid invoices to the schedule of base subcontract and change orders
> Verify credit invoices or un-invoiced amounts which may indicate a substitution, credit alternate, backcharge, etc.
> Reconcile back charges with subcontractor credits
> Confirm receipt of unconditional lien waivers
Material purchases

> Examine contractor's job cost detail
> Review competitive quotes obtained from material suppliers
> Review invoices and related material delivery tickets for job description, delivery address, authorized invoice approvals, appropriate acknowledgement of receipt for use at the site, etc.
> Audit for indications of material being returned for credit
> Audit for purchases of excessive amounts of material
> Compare the as-built quantity take-off to the actual quantities purchased and billed to the project
> Examine test and inspection reports
Bonds and insurance analysis

> Obtain copy of contractor's Performance and Payment Bonds and corresponding power of attorney from surety
> Confirm bond coverage directly
> Verify underwriter rating meets contractual minimum standards for financial stability in the event of a claim against the bonds
> Review the contract to determine the type and amount of general liability and other special insurance coverage required to be carried by the contractor
> Obtain copies of Insurance Certificates from contractor
Verifications of a contractor’s scope of work

> Develop a list of unusual scope of work items to be independently verified
> Recalculate contractor incentive bonus computations
> Reconcile use of contingency budget with status reports and documentation
> Reconcile accepted alternatives with change orders and project budget adjustments
> Verify unaccepted alternatives are not substituted
> Reconcile allowances with contractor delivered work
Equipment rental analysis

> Obtain a breakdown of the contractor’s equipment rental rates charged to the project
> Test to determine whether the equipment rates were billed properly
> Obtain daily reports and/or time sheets which document the equipment usage
> Review miscellaneous purchases charged to the job
> Ensure that the rates charged are consistent with those prevailing in the local area
Quality assurance and quality control

> Review minutes from various meetings, contractor's daily logs, engineering field test reports and any other correspondence files
> Obtain and review the contract with materials testing and quality control/quality assurance firms
> Obtain and review contractor and/or subcontractor submittals, shop drawings and cut sheets
ACUA professional education events

Midyear Conference
March 13-16
Orlando, Florida
Information & Registration at www.acua.org

Webinars
February 9 – Topic pending
April 13 – Part 3 of Construction Auditing
Additional resources

> www.acua-l@associationlists.com
> www.bakertilly.com/construction-audit-webinar
> http://www.theiia.org/
> https://www.thenaca.org/
> http://www.caacci.org/
> http://rsmeans.reedconstructiondata.com/
> http://www.auditnet.org/
Please feel free to ask questions in the screen to your right.

We will answer as many questions as time permits.
Thank you for participating today! Remember CPE certificates will be mailed to you by ACUA Headquarters in about three weeks.

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