

## Performing Construction Contract Risk Analysis

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Let's talk about an opportunity.



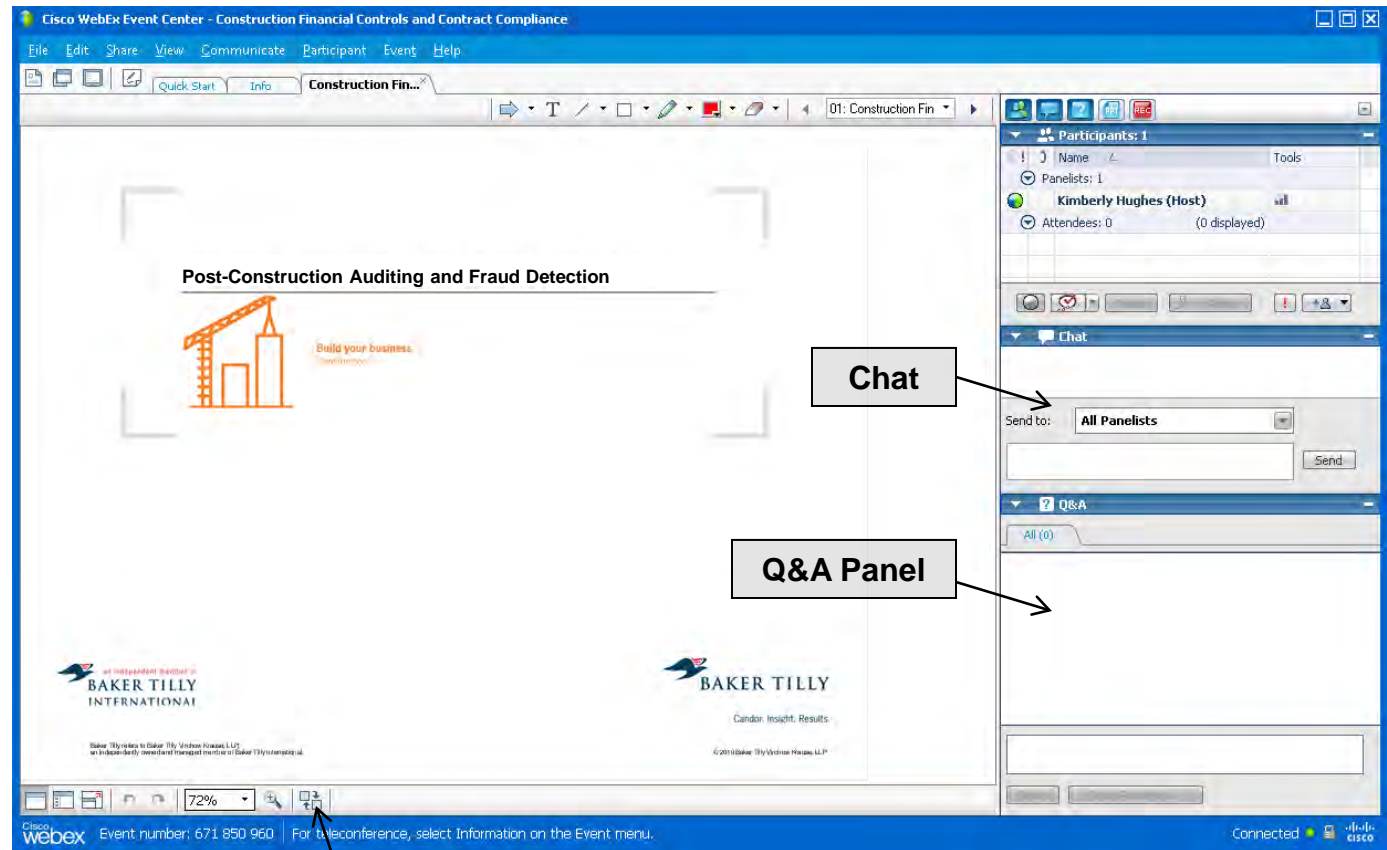
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# WebEx guide



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Today's topics:

What is a contract risk analysis?

Decomposing a contract

Contract assessment red flags

Refining contract content

## Polling question #1



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Were you able to attend or watch the recording of any of the previous construction cost control and audit webinars?

- A. Yes
- B. No
- C. Not yet, but I plan to view the recordings

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# Learning objectives



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- > Assess a contract for risk
- > Recognize unfavorable contract provisions
- > Uncover contract omissions
- > Identify project controls or actions to help mitigate construction project risk



## Contract types

- > Lump Sum (Stipulated Sum or Fixed Price)
- > Guaranteed Maximum (GMAX or GMP)
- > Unit Price
- > Time & Material
- > Cost Plus Fixed Fee or Cost Plus Percentage Fee



## Contract articles

- > Contractor's responsibilities
- > Owner's responsibilities
- > General conditions
- > Cost of work
- > Compensation
- > Insurance
- > Other conditions and provisions



- > Schedule of values
- > Reimbursable expenses
- > Fee
- > Contingency budget
- > Change orders/requests
- > Allowances
- > Labor burden
- > Overhead
- > Retention
- > Substantial completion

# Contracting objectives



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- > Execute a fair agreement that delivers construction value
- > Minimize contract terms subject to interpretation
- > Communicate intentions and responsibilities
- > Establish guardrails for managing the owner – contractor relationship

## What is a construction contract risk analysis?

Documentation of the construction contract project financial risks and their respective project controls intended to protect the owner's project interest .

## What isn't a construction contract risk analysis?

- > Construction audit program
- > Internal project controls gap analysis
- > Assessment of project controls effectiveness

## How should the contract risk analysis be used?

- > Evaluating the current project controls environment and identifying controls gaps
- > Communicating within an organization the shared responsibilities for mitigating risks
- > Identifying contracting improvement opportunities

## Polling question #2



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**When can a contract risk analysis be performed?**

- A. Prior to executing an agreement with construction professionals
- B. After the contract has been negotiated and executed
- C. After substantial completion
- D. Anytime in the construction project lifecycle

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Understanding your environment

Obtain current contract, agreements  
and addendums

Identify contract type

Document contract risks

Identify risk mitigating controls

# Understanding your environment



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- > Can you influence the final contract terms and conditions?
- > Are process control owners open to recommendations?
- > Are there outside influencers who may affect the value of contract recommendations?
- > Will resource constraints prevent effective project controls?

## Obtain current contract, agreements and addendums



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Effective contract analysis depends on having all of the contract and related agreements. A basic list of documents should include:

- > Design agreement with the architect
- > Construction management agreement
- > General conditions agreement
- > Contract addendums
- > Contract exhibits
- > Estimates, budgets or projections
- > Proposed project staff
- > Conceptual designs

The two most common types of contracts are:

- > Lump sum or fixed price contracts
- > Reimbursable expense contracts which include:
  - Guaranteed maximum price
  - Cost plus

Unit priced contracts are most often associated with utility and highway related work

## The primary risks of lump sum contracts are:

- > Change order control and pricing
- > Allowance control
- > Retainage control
- > Material substitution

## Identify contract type



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Reimbursable contracts have the additional risk of identifying, qualifying and quantifying which costs are truly project costs.

It is the understanding of these costs that enables the control professional to avoid many unnecessary project costs.

## Contract architecture

- > General conditions
- > Budgets
  - Reimbursable costs
  - Contingency
  - Allowances
- > Insurance
- > Fees
- > Performance
  - Change orders
  - Self-performance
  - Rework
  - Scope
  - Business ethics
  - Audit clause
- > Payments

General conditions is the contractor's reimbursement for items considered as overhead. Included in general conditions are costs for:

- > Back-office personnel and principals
- > Enterprise software systems
- > On-site office supplies
- > Moving, living and travel expenses for project personnel
- > Small tools
- > Site clean up and maintenance
- > Site security
- > Webcams



## Project costs typically excluded:

- > Job site utilities
- > Job site trailer
- > Insurance



## General conditions development guidelines

- > Be specific - request an itemized list of what is included in the general conditions
- > Don't let back-office job functions get transferred to the job site like human resources, background checks, etc
- > If a cost looks like it should be a corporate cost it is most likely a general conditions cost
- > Lastly, don't let items that are general conditions expenses be re-classed as a reimbursable expense

## Risk assessment red flags

- > Loosely defined general conditions terms
- > No list of included or excluded items
- > No general conditions budget
- > Costs defined as reimbursable costs look like they should be general conditions costs
- > Costs defined as both general conditions and reimbursable

## Risk mitigating controls

- > Verify general conditions calculations on every pay application
- > Verify job cost transactions do not include general conditions types of costs
- > Verify general conditions calculations are on actual costs or a percentage of the cost of work.

## Polling question #3



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### Facts

- > \$15M construction project
- > 4% general conditions fee
- > Contract terms allowed all direct project charges to be reimbursed
- > Supporting documentation show a corporate overhead allocation was charged as a direct cost

## Polling question # 3



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Which of the following expense treatments is correct?

- A. Deny the charge as a duplicate general conditions charge
- B. Accept the charge as a reimbursable cost of work

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Reimbursable costs are construction costs incurred by the contractor for the cost of construction that the owner is contractually obligated to reimburse the contractor

- > About reimbursable costs
- > Higher the costs the higher the CM fee
- > Higher the costs the higher the general conditions charge
- > Contractor's profit margins are preserved by maximizing project reimbursements

Cost pools facilitate contract analysis by grouping costs that share a common source and likely associated risks. Typical cost pools are:

- > Owner and contractor direct purchases
- > Construction manager direct labor
- > Construction manager allowable expenses
- > Subcontractor costs



Owner direct purchases (ODP) occur when the owner directly contracts with and pays for equipment, materials, supplies or services. This arrangement is usually made to:

- > Preserve a sales tax exemption
- > Utilize a specific purchasing arrangement unique to the owner
- > Multiple prime contractors
- > Expedite vendor payment
- > Very large, long lead time equipment purchases

## Purchase Provisions

- > Assigning procurement responsibilities. The contractor should provide a full procurement function including competitive bidding, purchasing, and job site receiving.
- > Define how equipment and supplier credits will flow to the owner
- > Define how excess materials will be tracked, returned and credited to the owner
- > Define how P-cards or corporate charge cards will be used to preserve the owner's tax exempt or other preferred purchasing treatment

### Risk assessment red flags

- > Absence of materials management provisions, specifically assuring the owner that equipment and materials have been received as ordered
- > Failure to acknowledge an owner may be sales tax exempt
- > Excessive procurement fees
- > No owner flow back provision for material or supplier credits
- > No reasonable provision to utilize payment discounts

## Risk mitigating controls

- > Review all materials purchases for sales tax treatment
- > Transfer all sales tax credits to the contingency budget
- > Compare owner direct and contractor purchases for duplicate transactions
- > Physically observe job site receiving process
- > Physical inventory of major pieces of equipment
- > Observe job site security
- > Three way match all purchases
- > Reconcile all credit card purchases with supporting documentation

These are the labor costs incurred by the CM for managing the construction project. The contract or addendums should be very specific to calculating these costs. Provision should include:

- > Each staff position with billing rate, field or office designation and exempt status
- > Exempt personnel billing may not exceed 40 hours per week
- > Overtime must be owner authorized
- > Annual increases should be defined and not exceed the local CPI
- > Billing rates should be verified with the market to ensure that they are not excessive
- > Billing rates should be all inclusive of the labor cost. Labor burden should be defined with a list of each burden component

## Price checking labor rates

- > Assume a labor burden of 45%
- > Divide each rate in the labor table by 1.45 to estimate the raw labor rate
- > Compare the raw labor rate with published staff rates:
  - McCormick & Dodge
  - Collective bargaining agreements
  - HR surveys
  - CFMA surveys
- > Excessive raw labor rates are a red flag that
  - Labor burden may be too high
  - Billing rate may be too high and includes undisclosed profit margin.

## Risk analysis red flags

- > Labor rates are too high or too low
- > No weekly billable hours cap on exempt employees
- > No estimated staff budgets
- > No definition of roles and responsibilities
- > Lump sum line item budgets
  - Lump sum project management budget
  - Lump sum burden rates

## Risk mitigating controls

- > Verify exempt employees only bill 40 hours per week
- > Verify labor rates on monthly pay applications
- > Compare direct labor hours billed with schedule progress
- > Confirm any overtime billed has been owner authorized
- > Document why overtime was necessary and if it will lead to a change order



In addition to labor, an owner may be billed for costs incurred by the CM during construction such as:

- > Trucks and transportation
- > Cell phones
- > Computer equipment
- > Software
- > Job trailer
- > Site utilities
- > Employee meals
- > Employee housing
- > Equipment rental
- > Tools and equipment purchases
- > Permits
- > Insurance

## Contract provisions and guidelines

- > Verify general conditions and reimbursable expenses do not overlap
- > Request rate schedules for all equipment rentals
- > Request rate schedules for all vehicle rentals
- > Verify what is included in the vehicle rental rate
  - Insurance
  - Depreciation
  - Maintenance
  - Repairs
- > Fuel costs are usually excluded from rental rates and stated as a flat daily rate or mileage rate

## Risk analysis red flags

- > Excessive vehicle rental rates. Compare with “Bluebook” rates to assess market pricing.
- > Mileage reimbursements in excess of IRS guidelines. IRS guidelines include cost of ownership, reimbursement should be less than IRS guidelines.
- > Cost of rentals exceeds FMV of equipment purchase
- > Absence of usage guidelines

## Risk mitigating controls

- > Reconcile travel costs with days on site
- > Verify all billing rates and per diems
- > Self-provide equipment instead of renting
  - Computers
  - Job trailer
  - Maintenance equipment
- > Reconcile equipment rental charges with FMV
- > Reconcile equipment rental with operator time
- > Verify fuel surcharges

## Usage guidelines

Contract allows for:

- > Housing and meals per diem
- > Mileage reimbursement
- > Travel time to job site

## Control challenge

How do you prevent the PM who drives two hours every day to the site from collecting per diem, mileage and travel time?

Subcontractor costs is a generic description for all of the skilled trades, specialty and craft work performed in the construction of the facility. Examples of subcontractor costs are:

- > Earthmoving and site preparation
- > Foundations and concrete
- > Steel work
- > Mechanical, Electrical and Plumbing (MEP)
- > Framing
- > Drywall
- > Cabinetry and finish work

## General information about subcontract work

- > May be self-performed by the general contractor
- > Contracting methods generally used are GMP, lump sum and unit price
- > Bids are based on the available construction documents
- > Awards are usually made to the low bid contractor
- > Bidders should be pre-qualified by the CM and the owner based on qualifications, skills and financial stability

## Contract provisions and guidelines

- > Require subcontract approval letters
- > Financial prequalification should be done prior to award
- > Contracts should include rate schedules for staff, equipment and materials
- > Mark up should be clear defined in the contract
- > Authorization to subcontract should be defined
- > Construction audit flow through provision



## Risk analysis red flags

- > No bid self-perform agreements
- > Lump sum self-perform bids
- > No competitive bid process
- > No pre-approved subcontractor list
- > Related party agreements
- > Bid packages based on partial construction documents

## Risk mitigating controls

- > Reconcile lien waiver amounts to subcontract value and schedule of values
- > Request and maintain copies of lien waivers
- > Compare self-perform bids with FMV of services
- > Deny profit margin on undisclosed related party transactions
- > Request subcontractor's current financial statements and backlog report
- > Review subcontractor's D&B and ownership structure for related party issues

# Incomplete or partial construction documents

## Facts:

- > Concurrent design and construction processes
- > Lump sum subcontracts

## Polling question # 4



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Which of the following are true?

- A. Project budget should include a larger than average contingency budget
- B. High likelihood of subcontractor change orders
- C. Project controls will need enhanced change order pricing controls
- D. All of the above

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Change order control is the contractually agreed upon process for scoping, pricing and approving change orders.

## Change Order Guidelines

- > Quote Method: Time and materials not to exceed
- > Format: Scope, cost, quantities and mark up
- > Timeliness
- > Usage
- > Authorization
- > Prohibit consolidating of change orders

## Risk assessment red flags

- > Lump sum change orders
- > Contractor's contingency usage
- > Push back based on:
  - It's easier for the contractor
  - It takes too much time
  - We can true that up later
- > Premium pricing or higher mark ups

## Risk mitigating controls

- > Verify approval and timeliness
- > Verify change order scope with contract
- > Verify change order pricing with contract
- > Document the purpose of the change order
  - Owner directed change
  - Code compliance
  - Design omission
  - Change in conditions

## Typical fees are:

- > Construction management fee (CM fee)
  - Current market ranges from 2%-4%
- > Procurement fees
  - Expect to pay 0%-.25%
- > Profit and mark up
  - Should be zero if paying a CM fee, otherwise 2%-4%
- > Warranty fee
  - Should be zero



## Fees are typically calculated based on the following construction costs

- > Cost of construction
- > General conditions
- > Change orders
- > Consumed contingency budget
- > Consumed allowances
- > Permits
- > Insurance

## Risk analysis red flags

- > Fee calculated on fee
- > Fee calculated on mark up
- > Owner fee credits for scope reduction and credits
- > Fee calculated on pre-construction costs
- > Fee calculated on architects fees
- > No fee credit for negative change orders or scope reduction
- > Fees that convert to lump sum costs

## Risk mitigating controls

- > Recalculate all fee charges
- > Reconcile to estimates
- > Recalculate all fees on change orders, budget transfers, contingency requests and allowances.

Project budgets are fluid and require close monitoring. A project can have several budgets:

- > Schedule of values
- > Contractor's contingency
- > Owner's contingency
- > Allowances

## Risk analysis red flags

- > Authorization to transfer budget within Schedule of Value lines
- > Authorization to utilize contingency budgets
- > Exposure line items - unquantifiable costs

## Risk mitigating controls

- > Reconcile all budgets to actual expenditures
- > Request documentation and log all authorizations for budget spends
- > Request estimates and scope for all exposure items and close them as quickly as possible

# Contract resources



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- > American Institute of Architects
- > CORENET [www.corenet.org](http://www.corenet.org)
- > Construction Owners Association of America [www.coaa.org](http://www.coaa.org)
- > Consensus Doc [www.consensusdoc.org](http://www.consensusdoc.org)
- > Construction Users Roundtable [www.curt.org](http://www.curt.org)
- > [bakertilly.com](http://bakertilly.com)

Risk assessment analysis is not a substitute for good legal counsel. All contracts and associated documents should be reviewed and approved by legal counsel prior to execution.



Questions??

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