NECA 2018
PHILADELPHIA
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CONVENTION EDUCATION

Risk Identification and Mitigation

Risk Identification and Mitigation

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This session is eligible for
1 Continuing Education Hour

For these hours to appear on your certificate, you must:

- Have your badge scanned at the door
- Attend 90% of this presentation
- Fill out the online evaluation for this session: www.necanet.org/neca2018

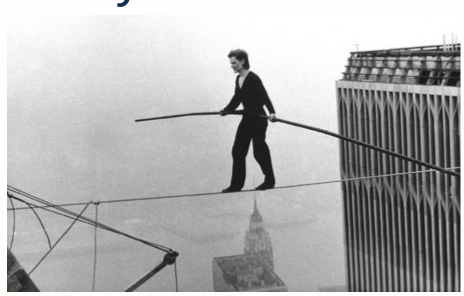
Topics for Today

- Risk Identification
- Risk Mitigation
  - Risk Allocation and Transfer

Risks are Everywhere

Personal Risks – life, liberty

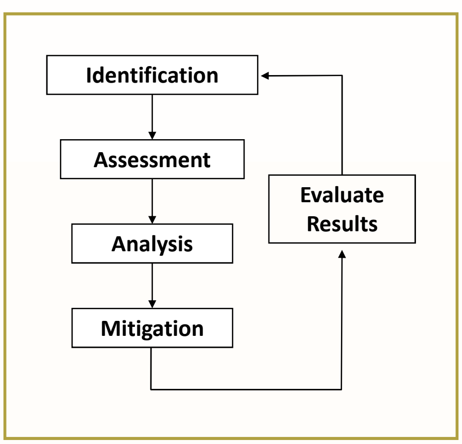
Business Risks
Markets, competition, continuity, staff …



Risk

- A definable event or action that, if encountered would have consequences affecting cost, schedule or quality.

The Risk Management Process



Enhancing risk assessment for international projects with attention to the risk management process

Typical Risks

- Adequacy of Project Funding
- Site Access
- Delay in Addressing or Solving Design Problems
- Delayed Deliveries
- Cost Escalation
- Worker and Site Safety

Dimensions of Risk

- Severity
- Variability
- Probability

Identifying and finding a Balance

- More risk should lead to more reward
- Where risk comes from
  - Nature of the work
  - Physical conditions
  - Contract Clauses
  - Legal Statutes
  - Lack of experience / expertise
  - Political risks

Specific Project Risks

- Quality expectations
- Unread Contract Clauses
- Delivery Method
- Safety
- Political
- New customers
- Design Team
- New Technology
- Unforeseen Conditions
- Funding
- Regulations
- Weather
- Competitive Climate
- Material Escalation
- Clients
- Accelerated Schedules

Managing Risk

- Step 1: Recognize and identify risks and who can best manage it for the project
  - Step 1A: Walk away from inequitable situations
- Step 2: Measure degree of exposure
  - Step 2A: Minimize those risks that are controllable?
- Step 3: Decide how to protect against those losses
  - Step 3A: Use insurance to manage some of the risks

Controlling Risk

- Keys to Controlling Risk:
  - Understand the scope of work as established in the contract
  - Establish a documentation system early in the project designed to manage anticipated potential risks
  - Understand the best practices for the type of delivery system or contract in use
  - Maintain current documentation of project activities

Controlling Risk (cont'd.)

- Keys to Controlling Risk:
  - Remain aware of job progress, production, quality, scope, and conditions at the site, and note compliance with or deviation from the scope of work identified in the contract
  - Discuss potentially significant events or risk occurrences with upper management
  - Put forth the greatest effort (e.g., documentation, communication, and coordination) in areas that represent the largest risks

Controlling Risk (cont'd.)

- Bill properly
  - Provide details
- Written Authorization
- Manage your piece well
  - Have it documented
- Read your contract
  - Have you ever said, "Boy I wished I hadn't read that clause?..."

Controlling Risk (cont'd.)

- Best Practices:
  - Open, honest communication
  - Share information
  - Do not view losses as "routine expenses"
  - Do not view losses as "insurable risk"
  - Losses should be minimized, regardless of whose responsibility they are
  - Use technology to help manage risk

Understanding and Managing Risk

Upstream

1. Project funding
2. Pre-construction information
3. Contract clauses
4. Environmental issues
5. Project complexity
6. Labor availability

Downstream

1. Subcontractor safety performance
2. Litigation
3. Workmen's Compensation claims
4. EMR
5. Bond rates
6. Number of vendors
7. Repeat work

Managing Risk

The Project Team's Role in Risk Control

- To understand the contract and the scope of work
- To establish early in the project the level of documentation required, based on the anticipated potential risk and type of delivery system/contract in use
- To document project activities
- To constantly check job progress, production, quality and conditions for variations or deviations from the originally contracted work
- To discuss potentially significant impact with project management
- To intensify the documentation effort when necessary to control large risks

Risk Management

- General Sources of Risk
  – Budget/cost (money problems)
  – Time (schedule problems)
  – Design (design flaws)
  – Quality (construction defects)
  – Safety (loss of life, loss of time, loss of property)

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Project Risks

- Project factors affecting risk:
  - Type of project
  - Type of delivery system
  - Complexity of systems
  - Custom or special technologies
  - Level of finish
  - Aggressive scheduling

Project Risks (cont'd.)

- The more risk you take, the higher the potential reward should be:
  - High-risk projects should have higher margins and/or larger contingencies
  - Risk is caused by uncertainty
  - The more issues that are unknown when the contract is executed, the riskier the project

Controlling Risk

- Techniques for controlling the risk of uncertainty on projects:
  - Exclusions: specifically state in the bid or proposal that certain types of work are excluded because not enough information exists to reasonably estimate the cost
  - Allowances: specify a dollar amount to cover the cost of work that will be included in the scope of work but has not been finalized
  - Contingencies: "extra" money to cover portions of the work that are not completely understood at the time of the estimate (such as connection steel)
  - Estimate entry for risk: similar to contingency, but more general in application

Controlling Risk (cont'd.)

- Risk taking, risk shifting, risk sharing, risk transfer:
  - Risk taking - pursuing projects, performing work (can't be in business without taking risk)
  - Risk shifting - can occur in contract negotiation
  - Risk shedding - paying others to take risk
    - Insurance
    - Bonding
  - Risk transfer - moving the risk to someone who can manage it better
    - Subcontracting

Risk Shifting

- Negotiating for contract language, indemnity, liability, responsibility, etc.
- Attempt to get a project partner to take a risk that they cannot (and should not) control
- Example: contractor bears the cost of unforeseen or differing conditions

Risk Management Strategies

- Assume Risk and Price according to Perceived Loss
- Transfer Risk to Another
- Assume Risk and Expend Some Funds to Manage or Mitigate Effects of the Risk's Occurrence

Risk Management Matrix

Risk	Objective	Strategy	Tactic/Tool	Assigned Responsibility

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Data Collection Findings- “Hot Buttons”

- No Damages for Delay
- Consequential Damages
- Indemnity
- Ambiguous Acceptance Criteria
- New or Unfamiliar Technology
- Force Majeure
- Schedule Acceleration
- Cumulative Impact of Change Orders
- Owner-Mandated Subcontractors
- Insurance Allocation
- Differing Site Conditions
- Design Responsibility
- Waiver of Claims
- Standard of Care (engineering and construction)

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Project Factors Affecting Risk

– In addition to the general risk factors, there are project factors affecting risk:
  - Location of project
  - Nature of project
  - Construction process
  - Project organization

Understanding and Managing Risk

- Successful management of risk also entails knowing when to involve corporate legal counsel in the making and enacting of decisions
- If you are not sure how to proceed, ask your legal counsel or VP of Operations

Risks related to Collection

- Who is the one paying the bills
- Are they credit worthy
  - Are you checking?
  - Is the bank lending money?
  - Is it a $1 LLC
  - Should you ask for a guaranty?
  - Make them stay current with all payments

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Questions

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Don't forget…

- 10:15 am – 11:30 am – Opening General Session with Keller Rinaudo
- 11:30 am – 5:00 pm – NECA Show Hours

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