Saving Money on Construction

Presented by: Doug Sitton, President
Sitton Consulting Group
April 18, 2008
Presentation

• Construction Project Defined
• Examples of Unintended Outcomes
• 10 Ways to Succeed
• Case Studies – Lessons Learned
Experience

- 28 years
- 500+ projects
- $1 Billion+ total construction cost
- Project sizes from under $10,000 to over $50,000,000
- Project types:
  - Public and private
  - Buildings and infrastructure
  - Several project delivery methods
Exponential Complexity

- Organizations
- People
- Processes
- Technical
- External Forces
Organizations

- Owner
- Owner-related Organizations
- Funding sources
- Design firms
- Consultants
- Contractors
- Utilities
- Regulatory agencies
- Manufacturers/vendors
- Local community
Project Delivery Complexity

- Design/Bid/Build
- Multiple Prime
- Construction Management as Agent
- Construction Management at Risk
- Design/Build
- Hybrids

Each has a different combination of cost, risk and complexity.
Technical Complexity

- Systems:
  - Structural
  - Mechanical
  - Electrical
  - Plumbing/fire protection
  - Security
  - Data/telecommunications
- Code requirements
- Sustainable design
- Furniture, fixtures and equipment
- Site
External Forces

- Material cost
- Material availability
- Labor cost
- Weather
When Complexity Wins

Undesirable Outcomes
Stairway to ??
Hidden Camera
Stretching Your Dollars
Too Close for Comfort
Street Parking Available
Big Problems from Little Mistakes

For a civil engineer, there's no such thing as a "little mistake."
The “Must Haves” to Succeed

• An integrated, one-team approach

• Independent expertise to lead and manage the team

• A focus on “defining moments”
10 Ways to Lower Cost, Reduce Risk and Increase Value

*Complexity Made Simple*
1. Select Independent Leader/Manager

- Total independence
  - No conflict of interest
  - Ensures checks and balances
  - Resolves issues quickly

Plus

- Management skills
- Technical expertise
2. Maximize Competition for Selection

- Comprehensive, fair selection criteria
- Qualifications and experience are key
- Never select on price only
- Ensures the “best of the best”
- Drives innovation
3. Negotiate Effective Contracts

- Clear and specific
- Include performance metrics
- Include consequences for exceeding or failing to meet metrics
4. Place Right People in Right Roles

- Right firm/organization first (align risk with control)
- Individuals’ next – clear roles and responsibilities
- Commit for the entire project

“Get the right people on the bus and in the right seats.”

Jim Collins – Good to Great
5. Plan Early

- Goals and objectives
- Existing conditions
- Program = budget = schedule
- Plan to prevent predictable problems

*If you don’t have time to do it right, when will you have time to do it over?*

John Wooden
6. Establish Effective Processes

- Who’s to use?
- Communication is No. 1!
- Thorough orientation
- Results-oriented
- Commitment by all
- Stick with it
7. Set Performance Metrics

- Communication/integration
- Quality, budget and schedule
- Dashboard – project success
- Frequency of measurement
- Consequences
- Include in contracts
8. Manage Early and Always

- Predict and prevent problems
- Solve problems immediately and completely
- Encourage, but manage, debate
- Micro-manage the first 10%
- Continuous monitoring of metrics
- Recovery plans
Plan and Manage Early
9. Apply Cost-Effective Technology

- Primary objective: current info available to everyone at all times
  - Project website
  - BIM
  - e construction administration

- Debunk: time-quality-cost – pick two

  “If taking a shortcut enables us to be more focused on the aspects of the project that require the most attention, then it can improve the quality of the end result.” Vince Poscente – The Age of Speed
10. Perform Independent Assessments

- Anticipatory – catch ahead of time
- Objective, focused
- Quality, budget and schedule
- Construction observation
- Issues, disputes and change orders
Case Studies

Costly Results
$13 Million New Construction

- New hybrid of construction manager at risk
- 15-month project completed 12 months late
- Change orders caused by new process
- Disruption to new facility operation
$13 Million New Construction

- New hybrid of construction manager at risk
- 15-month project completed 12 months late
- Change orders caused by new process
- Disruption to new facility operation

No overall leader/manager
Poor selection/contracting process
$14 Million Renovation

- Multiple prime
- 18-month project completed 12 months late
- $300,000 in delay claims
- Disruption to facility operation
- Loss of revenue
$14 Million Renovation

- Multiple prime
- 18-month project completed 12 months late
- $300,000 in delay claims
- Disruption to facility operation
- Loss of revenue

*No overall leader/manager*

*Wrong people in key roles*
$50 Million New Construction

- Construction manager as agent
- 24-month project completed 12 months late
- $5+ million in contractor delay claims
$50 Million New Construction

- Construction manager as agent
- 24-month project completed 12 months late
- $5+ million in contractor delay claims

No overall leader/manager

Poor selection/contracting process

Wrong people in key roles
Who Won in Each Case?

No one!

Two possible outcomes: win-win or lose-lose
A Positive Case Study

Learning from Success
$60 Million Program – New Construction and Renovation

• Design-bid-build (traditional)
• Multiple sites/multiple projects/fast-tracked
• “Can’t be done” – two large, successful general contractors
• Will be completed on time and under budget
Lessons Learned

• Independent leadership/management
• Checks and balances in place - design, construction and management were separate
• Intensive early planning
• Continuous management
• Maximized competition – all construction work bid to qualified contractors
Lessons Learned Continued

• Teamwork – contractors engaged during design on issues like cost, constructability and schedule
• Use of technology – maximized to improve communication and quality, and reduce time
Recipe for Successful Projects

• Must have
  – Integrated, one-team approach
  – Independent expertise providing the leadership/management

• Focus on “defining moments”
Construction Challenges Aren’t New

Suddenly, a heated exchange took place between the king and the moat contractor.
For more information go to:

www.constructionsavings.com

and sign up to receive e-newsletters on saving money on construction.