Agenda

• Escalation-What is it?
• Escalation-Can we manage it?
• Discussion
Escalation

• The Immediate Issues
  - Major natural disasters
  - Material cost increases
  - Bid market disruption
  - High volume of construction work
  - Regulatory climate

• Upcoming Issues
  - Continued high demand for construction
  - Shortage of labor
  - Global economy
Escalation

Major Natural Disasters

• The reality:
  - Approximately 250,000 homes destroyed by Katrina, Rita & Wilma
  - Roughly another 250,000 homes seriously damaged
  - Typical annual damage is 50 - 75,000 lost or damaged
  - Annual new housing construction is roughly 2,000,000
Escalation

Major Natural Disasters

- The reality:
  - Approximately $40bn in non-residential damage
  - Typical annual damage is $bn10 – $bn15
  - Annual non-residential market is roughly $bn400
Managing Escalation

Major Natural Disasters

• The reality:
  
  - Total damage is 10 – 15% of annual construction market
  
  - Given duration of reconstruction, likely impact is in the 3 – 5% range
  
  - Significant, but not overwhelming
Escalation

Major Natural Disasters

• The reality:
  – Materials
    • Likely to be sporadic shortages
    • Likely to be transient price spikes
    • Government intervention has skewed the market - so have rumors
    • There is a lot of uncertainty in price & availability
Escalation

Major Natural Disasters

• The reality:
  – Labor
    • Wages are lower than many parts of the country
    • Much of the labor is opportunist/non construction
    • The area has not drained the national pool of construction workers
Escalation

Material Cost Increase

• The reality:
Escalation

Davis Langdon Index (Steel Framed Building) Over Time

- Davis Langdon Materials Index (2002=100)
- CPI - All Urban Consumers (2002 = 100)
- PPI - All Commodities (2002 = 100)
- ENR 20 City BCI (2002 = 100)
Escalation

Material Cost Increase

• The Reality:
  • World steel prices rose by 100% in 2004 - $330/TN - $600/TN
  • Prices have leveled off at about $600/TN
  • US steel prices are higher than world steel prices by about $100/TN
  • Steel was $500/TN 10 years ago
Escalation

Steel Cost Increase

• The reality in construction:
  - Buildings use 20 - 30# of steel/GSF
    • At $400/TN, that is about $4.00/GSF
    • At $700/TN, that is about $7.00/GSF
  - Steel is everywhere in the building
    • Structure
    • Miscellaneous metals
    • Studs
    • Doors & Frames
    • Ductwork, Pipework & Conduit
Escalation

Material Cost Increase

• The reality:
  – Other strategic materials have seen significant increase
    • Wood
    • Cement
    • Copper
    - PVC pipe
    - Asphalt Oil
  – Pressure on strategic materials is likely to continue for some time
  – Commodity prices are likely to be volatile for some time
Cost of Construction

Material Cost Increase

• The reality:
  - Asphalt oil
    • Tons of oil/SF of roof
  - Oil
    • barrels of oil/SF of building
  - Copper
    • Tons of copper/SF of building
  - Diesel oil
    • Gallons of diesel/hour of operation
Cost of Construction

Material Cost Increase
The Reality:
When you are in the woods with a friend and you are attacked by a bear . . .
Remember . . .
You don’t have to run faster than the bear . . .
Just faster than your friend .

Bidders do not bid on cost, they bid against the competition
Managing Escalation

Market Disruption

- Volatility is a bigger issue than price increase.
  - Bidders can not lock in prices at bid time
  - Delivery schedules are extended
  - Bidders pay premiums to expedite supplies
  - Bidders double & triple book orders compounding shortage
  - Most contracts concentrate volatility risk at the lowest level (Vendor/Subcontractor)
  - Contractors are nervous
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STEEL PRICING

Vendor: $2,000
Subcontractor: $4,000
Owner: $16,000
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PUTTING THE RISK IN THE WRONG PLACE
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Construction Volume

• The reality:
  - Construction activity nationally has been fairly strong for several years
  - Some regions have been extremely strong for many years.
Construction Employment Percent Change - Region 10
(Washington, Alaska, Idaho, Oregon)
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Construction Volume

• The reality:
  - Competition for construction workers is very high, especially for skilled workers and superintendents
  - Limited supply of qualified contractors & sub-contractors
  - Quality & performance suffer
Cost of Construction

Regulatory Climate

• The reality:

  - Natural disasters are likely to increase the regulatory burden
  - High volume of construction delays approvals
  - Regulations tend to increase over time
    • Gulf coast hurricane & flooding codes
    • Earthquakes
Managing Escalation

Escalation Summary

• Big Issues
  – Busy Contractors
  – High degree of uncertainty/risk

• Not so Big Issues
  – Natural Disasters
  – Material & Labor increases

• Escalation impact is selective & variable
Measuring Escalation

• Market volatility
  - Significant market fluctuations not covered by most indices

• Code changes
  - Code & practice changes not covered by most indices

• Tighter budgets
  - Less room to accommodate missed inflation
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What can be done?

1. Recognize reality
   - Materials prices are not going back
   - Bidders have plenty of options, & may not be very interested in your projects
   - Material prices are going to be volatile for some years
   - Most contracts transfer the price risk to the subcontractor
Managing Escalation

What can be done?

2. Face reality
   - There is a limit to available accuracy
   - Uncertainty is here to stay
   - We have to be smarter in what we do
Managing Escalation

What can be done?

3. Speak reality
   - We have to communicate the truth to project teams
   - Speak early, speak often
   - Stop hiding behind
     - China
     - Katrina
     - Oil
     - US Exchange rate
Managing Escalation

What can be done?

4. Tackle reality
   - Material price volatility
   - Contractor capacity
   - Labor availability
   - Core escalation
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What can be done?
Reduce the impact of material volatility

• Pre-purchase materials
• Use fluctuation clauses
• ‘Cost plus’ with target cost
• Dedicated float for material procurement
• Break contract into smaller packages
• Delay bidding non-essential packages
• Reduce bid award period to accommodate shorter price locks
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What can be done?

Reduce the impact of contractor capacity

- Be nice - prompt pay, resolve change orders
- Good documentation
- Eliminate/reduce complexity
- Build long term relationships
- Framework agreements/Indefinite Quantity Contracts
Managing Escalation

What can be done?
Reduce the impact of labor capacity
  • Offsite fabrication
  • Standardization
  • Improve worksite environments
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What can be done?
Reduce the impact of core escalation

• Accelerate schedules
• 4D/5D design software (BIM)
• Standardize
• Eliminate/reduce indecision masquerading as flexibility
Managing Escalation

Realign some of the A/E’s risk
  - Limit the redesign clause
  - Recognize inflation during design
  - Actively manage design & cost

Absorb some of the Program risk
  - Develop program-wide contingencies/risk management protocols
  - Redefine success
  - Be willing to fail (occasionally)
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Making Changes - This takes:

- Nerve
- Freedom of action at project level
- Some budget/contingency flexibility
- Committed leadership
- More work from project team
- New contract forms
Managing Escalation

Business as usual

• Transfers risk to the architect – redesign clauses
• Transfers risk to the contractor – hard money bids
• Transfers risks to project staff – performance expectations
Managing Escalation

Business as usual

• Consequences
  – Everyone who buys the risk will charge a premium
  – You may still not get the performance you bought
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Conclusion:

- There are several inflationary factors at play
- Virtually no published index will pick these factors up
- Inflation will be higher and less predictable
- Quick & innovative responses are needed if the quality of construction is to be maintained.
Managing Escalation

- Discussion: