

**C.A.S.H./ACCM
SCHOOL CONSTRUCTION
101 WORKSHOP**



**CONSTRUCTION
101**

*May 15, 2002
Westin Horton Plaza
San Diego, California*

INTRODUCTION



MARK KELLEY
Attorney
Miller Brown & Dannis



Today's Presentation

- What we plan to accomplish
- The presenters
- How the program is structured



1. Planning And Design Phase

1:10 - 1:50

- Working with Architects and CMs
- Cost Savings and Value Engineering
- Constructability Reviews



2. Pre-Construction Phase

1:50 - 2:30

- Pre-construction
- Contract Administration by Districts
- Substitutions/Submittals/Sole Sourcing
- Schedule and Budget

- BREAK 2:30 - 2:45



3. Construction Phase

2:45 - 3:45

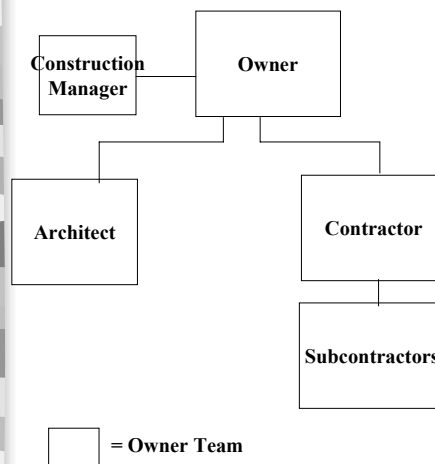
- Bidding
- Starting Construction
- Requests for Information
- Change Orders
- Payment and Stop Notices
- Inspection

- QUESTIONS AND ANSWERS 3:45 - 4:00

Areas Not Covered Today

- Funding issues
- CEQA
- Design-build
- Claims

Project Organization: Design/Bid/Build



1. PLANNING AND DESIGN



WORKING WITH ARCHITECTS AND CM's



BOB LISLE
3D/International



COST SAVINGS/VALUE ENGINEERING

MARK MARDOCK
Senior Vice President, Education
Services Group
McCarthy Building Companies, Inc.

Value Engineering – What is it?

- Cutting costs associated with a project without compromising the intended finish product.
- Analyzing alternative systems and materials to achieve the finished product while considering long term costs and maintenance.

Why is Value Engineering Important?

- To avoid budget over-runs.
- To allow the District options on how to best utilize available funds.
- To maintain equality across District boundaries.
- To avoid frills that would compromise opportunities to enhance the educational environment.

When Should Value Engineering be performed?

- Continuously in order to maximize the value of the finished product.
- The earlier you identify the options and opportunities, the greater opportunity you'll create for savings.

How does the Value Engineering process work?

- Often commences prior to the program development.
 - Existing space utilization / re-utilization.
 - What type of space shall be in new buildings.
 - Evaluation of MEP, Structural, Architectural systems.
 - Evaluate building locations w/ civil constraints.

Value Engineering during the design production

- CM prepares budget updates @ each design milestone.
- The TEAM reviews the design documents / budgets to confirm intended scope and develops options listing.
- CM develops all-inclusive system costs for each option.

Value Engineering during the design production

- The design team and the CM meet to review the VE options to develop a unified recommendation to the District.
- The TEAM meets to review the recommendations and establish a prioritization of the options and develop targeted alternates.

Continued Value Engineering

- The design team and the CM continue to review the design as it progresses to assure consistency with the TEAM's decisions and directives.
- The process continues through-out the design phase at each design milestone and as deemed necessary.

CONSTRUCTABILITY REVIEWS

STEVE PELLEGRIN
Vice President, Pre-Construction
Services
C.W. Driver Contractors

Constructability Reviews

- Is “Constructability” a word?
- What is the benefit?
- How is it done?
- What to expect.

Constructability?

- Utilized since the mid-1980's
 - Construction Industry Institute
 - Recommendations for improving the industry
- Do the plans describe a buildable project?
 - Plans and details
 - Specifications
- Are the plans biddable?
 - Clean appearance
 - Unambiguous
- Typically, CR's do not address
 - Owner/Program needs
 - Code compliance (i.e. plan check)

Benefits

- Biddability
 - Greater number of bidders/bid activity
 - Lower bid prices
- Bid Strategies: Subcontractors & General Contractors
 - Change orders are bad
 - Confusion and conflicts are bad
 - Clean, well-coordinated documents are good
- Bid Results
 - Huge spreads between bidders
 - Not a good sign
 - On a given day, 5-10% low to high

Benefits Continued

Example of Bid Results:

*Bid #1 Bid #2 Bid
#3*

GOOD	BAD	UGLY
10,123,000	9,435,000	9,435,000
10,334,000	10,334,000	10,334,000 *
10,416,000	10,416,000	11,625,000
10,715,000	10,715,000	12,400,000

Fair Market Value

Benefits to Good Bid

- Improved chance of success
 - No financial hardships
 - No desperate attempts to recover \$\$
- Reduced chance for change orders
 - Fewer disputes
 - Focus on big picture
 - Encourages teamwork
- Fewer Opportunities to litigate
- Allows project team to focus on project
 - Owner/District
 - Builder
 - Architect

How is it Done?

■ Drawing and Specifications Review

- Schematic design: Guide DD's
- 50% CD's
- **75% CD's**
- Plan check period

■ Dovetail with design schedule

- Schematic: 2-3 weeks
- CD's: 4-6 weeks
- Larger projects need more time
- 1 ½ - 2 hours per sheet

■ Performed by Construction Manager

- Project Manager
- Field Superintendent
- Estimator
- Multiple disciplines – multiple points of view

How is it Done?

■ Documents Reviewed

- Plans
- Specifications
- Geotechnical Reports
- Other: Hazmat; EIR or CUP; District's program; Owner furnished equipment; project general requirements

■ Review Process

- Check list: typical items by design discipline
- Drawings: sheet-by-sheet review
- Specifications: section-by-section
- Other criteria

Checklist

■ Typical Items

- P.O.C. for utilities
- Relocated utilities
- Civil – Architectural
- Structural
- Sections/elevations/details
- MEP Systems

■ Address

- Completeness
- Coordination
- Buildability
- Compatible with specifications

■ Deliverables

- Sheet-by-sheet narrative
- Red lined set of drawings
- Red lined set of specifications

What to Expect...

■ Design Team

- Assistance in providing better-quality construction documents
- CR must be done in coordination with design process to reduce additional work by A & E
- Ill-timed constructability reviewing can hurt design progress

■ CM/Builder

- Must be sensitive to design schedule
- Should have established process
- Take the time to review properly
- Correct most of the errors
- Reduce change orders by 50% or more

■ Owner

- CM "buys-in" to documents
- A & E solves problems in advance
- Reduced change orders
- Reduced litigation
- More time to address bigger issues/problem solving
- Satisfying results

2. PRE- CONSTRUCTION



PRE- CONSTRUCTION




DON LUSSIER
Supervisor of Facilities
Division
Corona-Norco Unified School
District

PRE-CONSTRUCTION

- The governing board of the district may require that each prospective bidder for a contract, under section 20111, complete and submit to the district a standardized questionnaire and financial statement in a form specified by the district, including a complete statement of the prospective bidder's financial ability and experience in performing public works.


■ THE CODE FOR PRE-QUALIFICATION OF BIDDERS

- Section 20111.5 Submission of standardized questionnaire and statement by prospective bidder on specified contracts: Standardized proposal form
- The questionnaire and financial statement shall be verified under oath by the bidder in the manner in which civil pleadings in civil actions are verified.



- Allows districts to set criteria that must be met by contractors prior to allowing them to bid on the public works project.

- If a school district utilizes this option, contractors bidding a project will already have been evaluated as to financial and experiential backgrounds.





- Each prospective bidder on any contract described under Section 20111 shall be furnished by the school district letting the contract with a standardized proposal form that, when completed and executed, shall be submitted as his or her bid.


- Bids not presented on the forms so furnished shall be disregarded.


- Contract or bid proposal forms shall not be accepted from any person or other entity who is required to submit a completed questionnaire and financial statement for pre-qualification.

- Must be submitted at least five days prior to the date fixed for the public opening.

- 
- The school district is then required to apply a uniform system of rating bidders on the basis of completed questionnaires and financial statements to determine which bidders are qualified to bid.
 - Questionnaires and financial statements shall not be public records and shall not be open to public inspection.

- 
- Two types of pre-qualifying procedures
 - (1) Pre-qualifying for all future projects on an annual basis
 - (2) Pre-qualifying on a project-by-project basis

- 
- In the event a bidder is disqualified and challenges the disqualification, the bidder must be afforded due process through a hearing prior to final disqualification. Only the bidders that are pre-qualified through this process are permitted to bid on the requirement.

- 
- Districts that intend to pre-qualify bidders on pending school projects are encouraged to begin the process well in advance.
 - Process through the Board of Education can take approximately three months.
 - Board policy adoption
 - First Reading
 - Adoption
 - Legally required advertisement

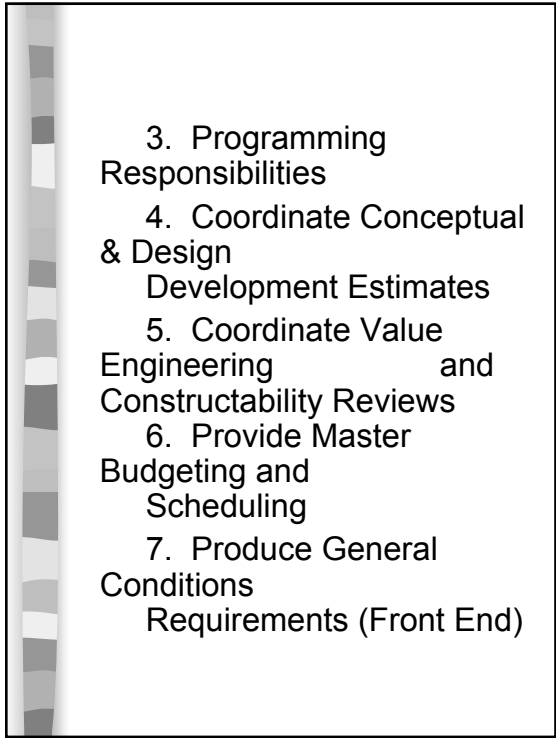
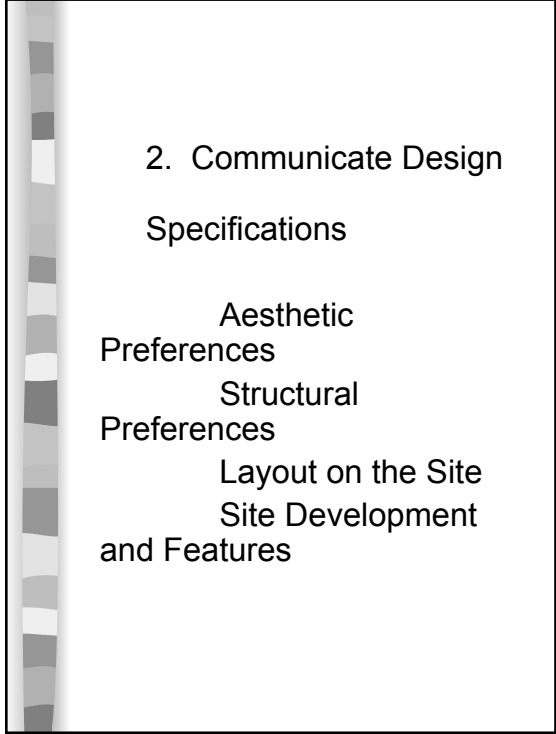
CONTRACT ADMINISTRATION BY DISTRICTS

DON LUSSIER

Supervisor of Facilities
Division
Corona-Norco Unified School
District

CONTRACT ADMINISTRATION BY DISTRICTS


- **Pre-Construction:**
Assume Architect is
selected and
Educational
Specifications are
complete.
 1. Site Selection
Suitability-Acreage/
Utilities/Grades/Preliminary
Soils
DTSC/CDE





■ **Contract Administration**

1. Local Agency Coordination
2. Monitor State Agency Submittals:
DSA/CDE/OPSC
3. Develop and Monitor Project Budget and Accounting Management Systems
4. Pre-Bidding: Timing/Advertising/
Bidder Interest/Assist Architect
with Bidder Inquiries

- 
5. Oversee Bid Evaluation
 6. Issue Notice(s) of Award and Notice(s) to Proceed
 7. Issue Contract Documents and Receive Insurance and Bonds

**SUBSTITUTIONS/
SUBMITTALS/SOLE
SOURCING**



MARK KELLEY
Miller Brown & Dannis

BRIAN JARAMILLO
Tilden-Coil Constructors, Inc.

**SUBSTITUTIONS/
SUBMITTALS/SOLE
SOURCING**



MARK KELLEY
Attorney
Miller Brown & Dannis

Substitutions

- Legal parameters
 - What is a substitution
 - Time limits pre-/post-bid
- Why substitutions are often viewed with suspicion
- Tips:
 - Preserve right to reject
 - Evaluate carefully: is it equal/better?
 - Require early submission (addendum?)

Submittals

- Why submittals can be a problem
 - Time control
- Approaches to submittals
 - Set a submittal schedule
 - Enforce the schedule
 - Put penalties/bar in place for late submittals




Sole Source

- Potential advantages of sole sourcing
 - Quality control
 - Cost control
- Legal limitations
 - Two products “or equal”
 - In some cases, one product
 - Meant to be a limited exception
 - “District standards”

SCHEDULE AND BUDGET



BRIAN JARAMILLO
Vice President of Construction
Tilden-Coil Constructors, Inc.



Schedule Methods

✦ Bar or Gantt Chart

✦ Critical Path Method,

or

Network Diagram, or

Precedence Method



Bar Chart

Series of bars plotted against horizontal
time

showing start and completion of each
activity:

➤ **Pro's**

- Simple and easy to read

➤ **Con's**

- Does not identify activity
relationship

- Does not identify time impact of
delays

- Does not identify critical path

- Does not identify float

Sample Bar Chart

Description	Year 2002			
	Jan	Feb	Mar	Apr
Layout	xx			
Footing/Grade Beams	xx			
Underslab Plumbing	xxxxx			
Main Electrical	xxxxxxxxxxx			
Underslab Electrical	xxxxxxxxxxx			
Prep and Pour S.O.G.	xxxxxxxxxxx			
Erect Structural Steel	xxxx			
Eposed Steel Erect/Weld		xxxxx		
Plumb Weld Struct Steel			xxxxx	
Metal Deck Roof				xxxxxx

Critical Path Method (CPM) Schedule

- A Graphical network plan showing all the activities in concert with it's preceding and succeeding activities.
- It represents a series of continuous activities with zero float, thus identifying the critical path.

What does that mean?

- ✓ Sequencing of activities are planned & deliberate
- ✓ Start & finish dates of activities are known
- ✓ Overall completion can be determined
- ✓ Critical activities are known (CPM)
- ✓ Non critical activities are known (Float)

Float

- ◆ Total Float - The number of activities that can be delayed without affecting the project finish dates.
- ◆ Free Float – The latest time an activity can start without affecting the succeeding activities.

Which activities have float?

- Non critical path activities have float

Schedule Types

- ◆ Development Schedule
- ◆ Bid Schedule
- ◆ Construction Schedule
- ◆ “Look Ahead” Schedules
- ◆ Recovery or “Work-Around” Schedules

Development Schedule

The Development Schedule identifies and provides for all activities, by all parties, that affect the “Critical Path” of the Project. This can include:

- Program Development
 - Committee Organization
 - Solicit & Procure Professionals
 - Develop Educational Specification
- Design & Engineering
 - Program Verification
 - Schematics
 - Design Development
 - Construction Documents
 - Constructability Review

Development Schedule (continued)

- Entitlements
 - Utility Plan Approval
 - CDE/DSA Approval
- Preconstruction Activities
 - Legal Advertising
 - Bid Period
 - Bid Recommendation
- & Award
 - Contract Execution & NTP
- Construction Activities
 - Overall Duration
 - Project Phasing
 - No Trade Detail Yet
 - Occupancy

Bid Schedule

The Bid Schedule is issued as a part of the bid documents. It establishes the contractual performance standard that the bidder is to achieve.

- For General Contracted Projects, this schedule identifies the required duration, from Notice to Proceed to Project Completion, expressed in calendar days.
- For Multi-Prime Construction Management Projects, the Construction Schedule, as prepared by the Construction Manager, should be included as a Contract Document.

Construction Schedule


- The Construction Schedule is a detailed, multi-activity “critical path method” schedule showing the planned sequencing and durations of all construction activities, from Notice to Proceed to Project Completion
- The Construction Schedule should not contain activities that are not the Contractor(s) responsibility.
- For General Contracted Projects, this schedule should be developed and issued by the General Contractor.
- The Schedule is a contractually important event.
 - GC - Acceptance / Approval of Logic
 - GC - Acceptance / Approval of Early Completion
 - CM - Schedule is a Contract Document
- The Construction Schedule must be regularly “status’d” by the General Contractor or Construction Manager

“Look-Ahead” Schedules

- The “Look-Ahead” Schedule or “Fragnet” provides the necessary focus to call attention to significant upcoming activities (typically three weeks).
- On General Contract Projects, the General Contractor should produce these.
- For Multi-Prime Construction Management Projects, “Look-Ahead” Schedules will be prepared by the Construction Manager based on Trade Contractor input at production meetings.

Recovery or “Work-Around” Schedules

- If the Project is falling behind schedule and the “occupancy” date is critical, a coherent plan for recovering the schedule loss is essential.
- Determine your actual schedule status regularly (Status’d Schedules).
- If the schedule is losing ground, make it an issue early and do not accept general assurances of recovery. Recovery does not happen through good intentions. It happens through solid planning.



Recovery or “Work-Around” Schedules (continued)

- A Recovery Schedule should be one of the most detailed schedules that are developed in the course of the Project.
- A “Work Around” Schedule is simply a small Recovery Schedule, designed to show how a minor, identifiable schedule set-back will be “worked around”. These are generally preventive, not remedial.



Budget Types

- Development or Project Budget
- Construction Budget

“Design Budget”

The total of hard construction costs, plus the cost to manage the construction. This is the budget that is of interest to your Design Team. It includes only two (sometimes three) of the many budget items we discussed:

- ◆ Land Acquisition Costs
- ◆ Cost of Entitlements
- ◆ Design Costs
- ◆ Agency and Misc. Fees
- ◆ “Hard” Construction Costs
- ◆ Cost of Managing Construction
- ◆ Miscellaneous Owner Costs (tests, inspections, etc.)
- ◆ FF&E (Optional, but state it as a separate element)
- ◆ Interim Housing
- ◆ Move-In Costs

Budgeting

- ✍ Develop your Budget carefully and in reasonable detail. Base it on historic cost data and unit cost allowances.
- ✍ Follow an agreed format that the Architect, Owner & CM can follow on Development Budgets.
- ✍ Follow the CIS format on Construction Budgets.
- ✍ Provide Budget breakdown for supplemental grants.
- ✍ For Multi-Prime Projects, break the CIS format estimate down into bid package groups for bidding purposes.
- ✍ Define your sources of revenue

SAMPLE DEVELOPMENT BUDGET

	Budget Revisions	Construction Documents	Design Development
	03/22/2002	03/19/2002	02/21/2002
Development Budget			
Construction Costs			
Utility Service	\$210,326	\$210,326	\$201,200
Off-Site Development	\$0	\$0	\$0
Service Site Development	\$521,201	\$521,201	\$521,202
General Site Development	\$1,250,750	\$1,250,750	\$0
New Construction	\$6,811,200	\$6,811,200	\$7,548,510
Cost Saving Measures	(\$172,617)		
Total Construction Costs	\$8,320,860	\$8,793,477	\$9,271,912
Contingency	\$332,834	\$351,739	\$173,562
Sub-Total	\$8,653,694	\$9,145,216	\$9,445,474
Change Order Contingency	\$259,611	\$365,809	
CM Fees/General Conditions	\$951,906	\$1,005,974	\$954,538
Total Construction Estimate	\$9,865,212	\$10,516,899	\$9,400,000
Project Costs			
AE Fees	\$840,490	\$923,109	\$1,025,000
AE Reimbursables	\$25,000	\$25,000	\$60,000
Furniture and Equipment	\$368,000	\$368,000	\$368,000
DSA/Plan Check Fee	\$55,000	\$55,000	\$70,000
County of Riverside Fees	\$15,000	\$15,000	inc
Soils Report	\$35,000	\$35,000	
Environmental Report	\$50,000	\$50,000	\$70,000
Site Survey	\$20,000	\$20,000	\$0
Tests and Inspections	\$95,200	\$95,200	\$75,000
Inspector of Record	\$124,105	\$124,105	\$98,000
Bid Printing	\$20,000	\$20,000	\$0
Misc. Reimbursables	\$10,000	\$10,000	\$0
Land Costs	\$2,202,720	\$2,692,720	\$2,202,720
Enhancements/Developer	\$424,258	\$531,120	\$600,000
Subtotal Project Costs	\$4,284,773	\$4,444,254	\$4,465,720
Project Costs Contingency	\$71,391	\$177,770	\$298,930
Total Project Costs	\$4,456,164	\$4,622,024	\$4,764,650
Total Project Budget	\$14,321,376	\$15,138,923	\$14,072,222

SB 50 State Matching Funds Breakdown		
Grant Amount = \$5,720		
Basic Grant	# of Grants	Total Funding
	940	\$5,376,800
1/2 of the following items:		
Site Acquisition		\$1,101,360
Utilities		\$102,100
Off-site		\$0
Service Site		\$268,101
Total		\$6,848,361

Project Revenue	
CFD # Sample - Series 1	\$4,312,200
CFD # Sample - Series 2	\$2,527,161
SB 50 State Matching Funds	\$6,848,361
Additional Mitigation CFD # Series 2	\$730,000
Total	\$14,384,722

Funding	\$14,384,722
Project Cost	(\$14,544,150)
Balance	\$40,593

**BREAK (10
MINS.)**

3. CONSTRUCTION PHASE



BIDDING



STEVE PELLEGRIN
Vice President, Pre-Construction
Services
C.W. Driver Contractors

Bidding Process

- Orchestrate the process
- Opportunities to create success
- Bid opening
- Post bid

Orchestrate Process

- Bid day and time
 - AIA/AGC recommends 2:00 p.m. Tuesday, Wednesday or Thursday
 - Consider competing bid activity
 - Consider holidays
 - **Keep it simple**
 - Allow 4 – 6 week bid period
 - Allow ample time after addendum
 - 3 days to one week depending on complexity

Opportunities for Success

- Good, biddable documents
- Prequalification of Contractors/Trade Contractors
- Intelligent bid date and time
- Ample time to prepare bid: 4 – 6 weeks
- Simple bid form
 - Reduces chance for error

Bid Openings

- Bid Forms
 - Base bid
 - Alternate(s): no more than 4 – 6, depending on complexity
 - Subcontractor listing: simple format, subcontractor and city
 - Bid bond
- Post-bid Submittal (Prior to bid opening)
 - Alternates
 - Unit prices
 - Qualifications, certifications and affidavits
- Bid Opening
 - 24 – 48 hours after initial bid submittal (if complex bid forms)
 - Starts clock for errors
 - Subcontractor listing error
 - Clerical error
- Bids valid for 60-90 days

Post-Bid

- **Appoint low responsible bidder**
 - Base bid
 - Alternates
 - Basis of award described in documents
 - Extension of unit costs (if applicable)
- **Problems with bids: delays awards**
 - Missing essential documents
 - Subcontractor listing abuses
 - Inadvertent clerical errors
 - Subcontractor listing errors
 - Budgets
- **More problems with flawed bid process**
- **“No comment” breeds contention**
- **Communication fosters understanding**

STARTING CONSTRUCTION

STEVE PELLEGRIN
Vice President, Pre-Construction
Services
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Starting Construction

- Pre-Construction Workshop
- Primary Issues
- Pre-Construction Conference



Starting Construction

- Pre-Construction Conference Workshops

- District/Architect/Builder/CM
- Each party brings agenda
- Mutually agree on issues
- District Goals and concerns

- Primary Issues

- Notice to proceed
- Entitlement/Permits
- Inspection process
- Site access & logistics
- Utility contacts
- Lines of communication
- Documentation procedures
- Schedule of values
- Project schedule



Starting Construction Con't.

- Pre-Construction Conference
 - Owner/Architect/Key Consultants/Builder/Construction Manager/IOR (or key Subcontractor)
 - Agenda from workshop
 - Cover all housekeeping issues; meeting dates; payment processing; insurance; meeting protocol; communications protocol; submittals & approvals; RFI process; safety concerns; emergency phone numbers, etc.
 - Confirm decision-making authority and philosophy
 - Embrace project goals
- Start the project with a positive and productive approach
 - It will lay a solid foundation for success!

RFI's



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RFI's

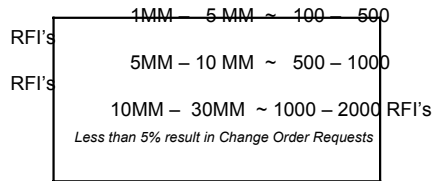
- What Are They?
- RFI – Reality & Responsibilities
- RFI's – They Can Be Your Friend

RFI's – What Are They?

- RFI – REQUEST FOR INFORMATION
- Owner's Perspective - Request for Compensation
 - Opportunity for \$ Change Order \$
 - Demonstration that the Architect is *competence under-enhanced*
- Architect's Perspective - More Work For Me!
 - Opportunity for \$ Change Orders \$
 - Demonstrates that the Builder is *intelligence deprived*
- Builder's Perspective - What's The Big Problem?
 - Why does it take so long?
 - If the Architect will answer the question, I don't need to open the spec book.

RFI's - Reality

■ OVERVIEW



■ ORIGINS

- Subcontractor submits questions to builder
- New information received from Architect (Addendum, bulletin, meeting minutes, field observations)
- Proactive research by Builder
- Architect/Inspector Questions Builder
- Oops...it doesn't fit!

■ TREND

- Subcontractors and Builders are more sophisticated
- Fear of not having things documented

RFI's - Process

- Question-issue develops
- Builder does research & formalizes questions
 - Usually in a pre-printed format with attached sketch or photo
- Builder suggests remedy
- Builder describes urgency
 - Usually 3 days
 - Some immediate/critical
 - Some 10-15 days
- Architect/District responds with sense of urgency
 - No further action required from Architect/District/CM

RFI's - Project Team Responsibility

- **Owner/District/CM**
 - Consider RFI a useful tool
 - Monitor for spirit & content
 - Encourage Builder to be responsible
 - Encourage Architect to respond appropriately
 - Don't allow RFI to serve as notice for claim or delay
- **Architect/Consultants**
 - Respond with direct, helpful and timely answers
 - Don't "posture" with answers, but be smart
 - Don't do Builder's work
 - Communicate with Builder
 - If RFI causes change directive, issue directive
- **Builder/CM**
 - Do homework, don't submit frivolous RFI's
 - Suggest no-cost solutions
 - Request reasonable turnaround time
 - Attach sketches or digital photos (email)
 - Track outstanding RFI's
 - Track response time
 - Be sensitive to Design Team
 - BE PROACTIVE!

RFI's – They Can Be Your Friend

- **When abused:**
 - Builder irritates Architect – wasting his/her time with unnecessary RFI's or unreasonable turnaround time
 - Owner/District/CM convolute process by "posturing" with answers
 - Architect slows down progress by incomplete answers
- **When utilized effectively:**
 - Easy documented response to questions that arises
 - Builder provides the simplest corrective action
 - Most of the time without added cost
 - Allows criteria to measure proactive attitude of Builder
 - Can prevent delays
 - Essential and useful tool to manage the construction process

CHANGE ORDERS

MARK KELLEY
 Attorney
 Miller Brown & Dannis

Change Order		A Change Order shall be a written form for use of the General Contractor. It shall be used to change the original contract documents and shall be approved by the Architect and approved by the Owner.	
Client: _____ Address: _____ City/State/Zip: _____	Date: ____/____/____ Draw No: _____ Order No: _____	No Change Order shall be used to change the contract documents unless approved by the Architect and approved by the Owner.	
DESCRIPTION Description: _____ Quantity: _____ Unit: _____ Material: _____ Labor: _____ Cost: _____		CONTRACT INFORMATION Contract No: _____ Contract Date: _____ Contract Value: _____ Contract Type: _____ Contract Status: _____	
DETAILS OF CHANGE Item: _____ Description: _____ Unit: _____ Quantity: _____ Price: _____ Total: _____		Signature of Contractor: _____ Signature of Architect: _____ Signature of Owner: _____ Date: _____	
CONTRACT INFORMATION Contract No: _____ Contract Date: _____ Contract Value: _____ Contract Type: _____ Contract Status: _____		Signature of Contractor: _____ Signature of Architect: _____ Signature of Owner: _____ Date: _____	
DETAILS OF CHANGE Item: _____ Description: _____ Unit: _____ Quantity: _____ Price: _____ Total: _____		Signature of Contractor: _____ Signature of Architect: _____ Signature of Owner: _____ Date: _____	
CONTRACT INFORMATION Contract No: _____ Contract Date: _____ Contract Value: _____ Contract Type: _____ Contract Status: _____		Signature of Contractor: _____ Signature of Architect: _____ Signature of Owner: _____ Date: _____	
DETAILS OF CHANGE Item: _____ Description: _____ Unit: _____ Quantity: _____ Price: _____ Total: _____		Signature of Contractor: _____ Signature of Architect: _____ Signature of Owner: _____ Date: _____	

Problems With Change Orders

- Cost: Prices not bid
- Admission that District's team caused contractor extra cost/time:
 - Plans and specifications
 - Coordination
 - Decision making
 - Changed its mind
- Opens the door to claims later

Handling Change Orders

- **Set up a process to evaluate and pay promptly**
- **Evaluate the validity of change order requests**
- **Evaluate proposed costs, including markups**
- **Evaluate time, including effect on schedule**
- **Monitor time and materials if applicable**

Handling Change Orders, Cont'd.

- **Close the door on claims**
- **Keep an eye on project issues that come up**
- **Be prepared to negotiate and settle**
- **Bottom line: keep the project moving**

Change Orders

- **Claims procedures should include:**
 - Submittal requirements of claim
 - Evaluation for merit
 - Evaluation for entitlement
 - Negotiation and settlement of claim
 - Appeal procedure

PAYMENT AND STOP NOTICES

WILLIAM SAVIDGE

Director of Facilities Modernization
Fremont Union High School
District

TIMELY PAYMENT-THE MOST EFFICIENT TOOL ON ANY JOB

- Specify your cut-off point and keep to it.
- Use the Proper pay request document.
- Do not project.
- Review pay request line item breakdown.
- Be aware of any attempts to front load.
- Escrow accounts for retention.
- Insure timely processing.
- Get all the signatures.
- Double check the math-especially change orders.

- Require significant documents:
 - Certified payroll for period of prior application.
 - Waivers/releases from subs/suppliers for period of prior application.
 - Receipts/bill of sale as applicable.
- Contractor requests for partial retention release.
- Always hold that retention until 35 days after Notice of Completion filing.
- Don't use pay requests as weapon.....use as a tool.

STOP NOTICES-A WARNING SIGNAL

- What is a stop notice?
- Require a complete sub list.
- Keep a file for 20 day preliminary notices.
- Process stop notices timely.
- Insufficient funds/pro-rata share.
- Action(s) to enforce stop notice.
- Bond(s) to release stop notice.
- Affidavits and counter affidavits.
- Be prudent-solicit legal advice when necessary.

INSPECTION



WILLIAM SAVIDGE

Director of Facilities Modernization
Fremont Union High School District

INSPECTION



- School District required to provide an Independent Project Inspector
- For every DSA-approved Project
- Provides *continuous* Inspection of all work
- Coordinates Special Inspection/Testing
- Major player on projects—Quality Control

INSPECTION Con't.

- Project Inspector Roles and Relationships
- District recruits, executes Inspector contract
- Architect must approve Inspector
 - Form SSS-5 indicates experience, workload
 - At start of each project
- Reporting relationship to DSA
 - DSA Certification required for Type of Project

INSPECTION Con't.

- Reporting Requirements to State, District
 - Verified Reports
 - Project Completion
 - Certifies Project, Transfers Liability to State
 - Semi-Monthly Reports
 - Construction Status Report every two weeks
 - To Architect/Engineer, District, DSA
 - Daily Log/Reports
 - Workforce, Tasks, Issues, Delays



INSPECTION Con't.

- District Nuts & Bolts of Project Inspection
- District Hiring Options
 - Resident Inspectors, Firms, Independents
- Costs of Inspection
 - Budget 2% - 3% of direct Construction Costs
 - Allow Additional 1% - 1.5% for Testing
- Contract Requirements
 - Insurance, Termination, Reporting, Files

QUESTION AND ANSWER



**C.A.S.H./ACCM
SCHOOL
CONSTRUCTION 101
WORKSHOP**



**CONSTRUCTI
ON 101**