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**Meeting Challenges & Overcoming Obstacles During
CCA – Approaches Toward Best Practice**



Description

An approach toward ideas for advancing the effectiveness and value of architectural service provided in the construction contract administration phase. Identifying some of the challenges encountered during this phase, establishing methodology in anticipation, to avoid them and preparation made to surmount them.

Learning Objectives

After participating in this webinar attendees will:

- Understanding the necessity, objectives and value of a clearly defined scope of CCA services.
- Be able to evaluate and develop approaches toward preparedness and beneficial staff training.
- Discuss the benefits of CCA staff involvement in the design and documentation process and potential benefits toward proper interpretation of the contract documents.
- Develop an understanding of the approaches toward controlling the CCA procedures and process.

Identifying Potential Obstacles That May Present Challenges

5. Controlling the process within the defined scope of services.
 6. Ensuring that the contractor has correctly interpreted the documents.
 7. Electronic tools and instruments of service.
 8. Value Engineering vs Cost Reduction.
1. Definition of the scope of CCA services.
 2. Staffing, who does the work, provides the CCA services as the Architect.
 3. Qualifications, how does one develop the knowledge and experience necessary to perform this service.
 4. Understanding the scope of the project and the content of the construction documents to correctly interpret the documents and perform the services.

Scope of Service

Team must understand the scope, fees, and requirements of the contract

Contractual Agreements

- a) AIA B101
Standard Form of Agreement Between the Owner and Architect
- b) Agreement Between the Owner and Contractor

Contract Documents

- a) AIA A201
General Conditions of the Contract for Construction
Supplementary Conditions
- b) Project Manual
 - a) Division 01 of the Project Specifications



Scope of Service

Internal Team Preparation

- a) Review the Contractual Agreements
- b) Review and Establish Procedures for CCA

Scope Definition

- a) Include a Responsibility Matrix
- b) Description of Add Services
- c) Value Engineering: Do it early, communicate consequences, vet ideas in-house, and establish a process to respond

Outline For Memo of Construction Administration Procedures

I. Responsibilities of Key Personnel

- A. Owner
- B. Contractor
- C. SCB
- D. Consultants
- E. Others

II. Procedures for Site Visits, Meetings and Reports

- A. O/A/C Meetings
- B. Pre-installation Conferences
- C. Project Visits and Reports

III. Project Schedules

- A. Initial Schedule and Review
- B. Updated Schedules

IV. Payments

- A. Schedule of Values
- B. Pencil Draft
- C. Final Draft

V. Changes

- A. Owner Initiated
- B. Contractor Initiated
- C. **Schedule of Change Related Activities**

VI. Submittals

VII. General Conditions

VIII. Project Directory Updated to Include Contractor's Personnel

IX. Schedule of O/A/C Meetings, Payment Pencil Draft Submittal and Review Dates, Payment Final Draft Submittal Dates

X. Samples of Various Forms to be Used

Staffing – Who Does The Work

Focus Group –
CCA Phase Dedicated
Team

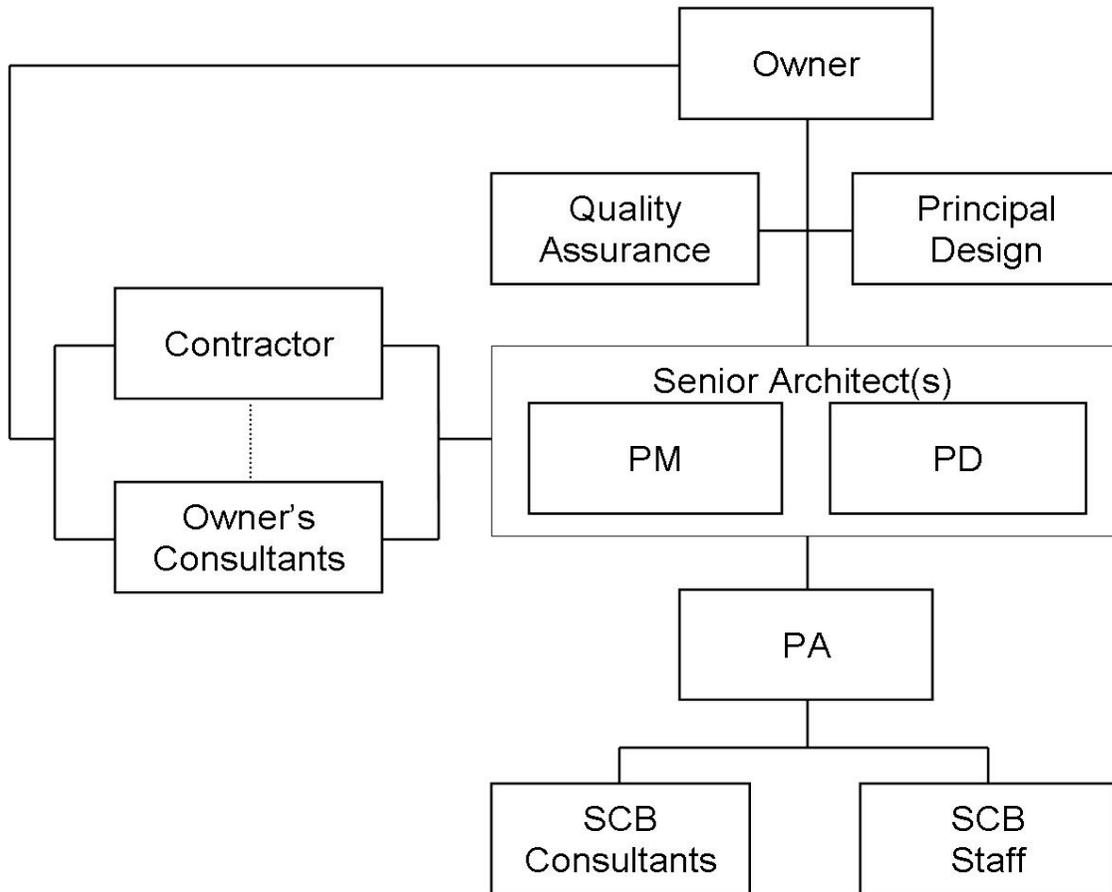
Architect Project Team Leader

Staff Mix

Master and Apprentice

Combination

Professional Development



Staffing – Alternative Approaches

Focus Group – CCA Phase Dedicated Team

Advantages

- Experience - Specialist
- Focused
- Flexibility

Disadvantages

- New face of the project design team
- Unfamiliar with project and project history

Architect Project Team Leader

Advantages

- Project design team continuity
- Benefits by familiarity with the project history

Disadvantages

- Duration of engagement

Staffing – Alternative Approaches

Combination

Advantages

- Project design team continuity
- Advantages of the M/A approach
- Potential for lessons learned feedback

Disadvantages

- New face of the project design team
- Unfamiliar with project and project history

Staff Mix –

Master and Apprentice

Advantages

- Opportunity for Staff Development
- Human Resource Flexibility

Disadvantages

- Potential Disadvantages of the Focused Group Approach

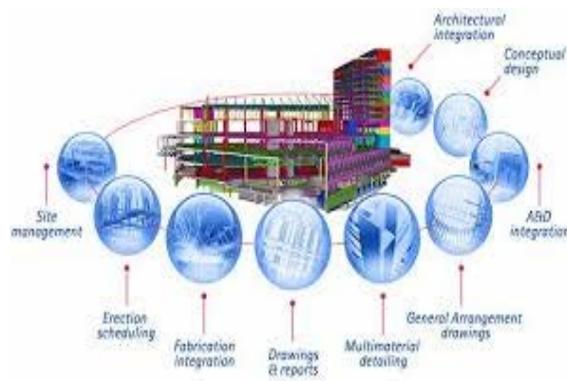
Construction Contract Administration Education

Mentoring & Training

Seminars: Targeted training, systematic on-demand training,

Master and Apprentice - one-on-one mentoring

Balance Specialized Knowledge - BIM education for CCA experts



Construction Contract Administration Education



Establishing and Developing a Knowledge Base

CCA Guidelines

CCA Staff Periodic Group Meeting and Roundtable



Gathering Lessons Learned, Measuring/Metrics, Disperse Feedback

Construction Contract Administration Education

CCA Guidelines

Manual : Provides a general overview of the CCA activities, procedures, requirements and forms

A structured process and standardization of procedures.

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Scope of Project

CAA Team Preparation

Preconstruction Involvement during the Design Phases

- a) Involved during establishment of project goals
- b) Fosters a knowledge of the project development history
- c) Influential when considering and proposing project systems and materials
- d) Working relationship with the consultants and an understanding of the scope and construction documents of the other design disciplines
- e) Familiarity and relationship established with the contractors
- f) Quality assurance during construction document development

Scope of Project

CAA Team Preparation

Thorough understanding of the contract documents at commencement of the CCA phase

- a) Hit the ground running
- b) Awareness of any special permit qualifications or code compliance interpretations
- c) Cognizant of the intended level of detail and responsibility for content – BIM LOD
- d) Ability to correctly interpret the documents fairly and maintain the design intentions
- e) Ability to evaluate the inevitable need to make a change



Scope of Project

Educating the Contractor

Preconstruction Services

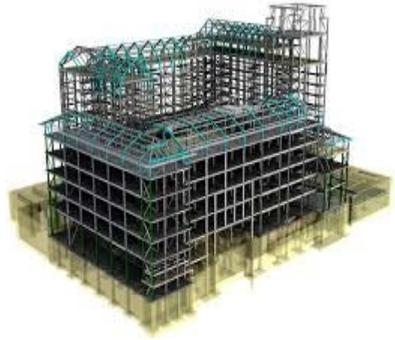
- a) Team approach to considering and proposing projects systems and materials
- b) Accurate and comprehensive understanding of the project scope
- c) Accurate and comprehensive preliminary pricing

Bid Phase Scope Reviews

- a) Review and affirmation of the correct and complete scope for each portion of the project
- b) Appropriate opportunities for value engineering –Team approach

Project:
Location:

PARAMETRIC BUDGET TARGETS				
	Average Historical Percentage Distribution Less Contingency	Target Percentage Distribution	Cost	Cost per Gross Building Square Foot (262,000 SF)
SCHEME XX - XXXX CONCEPT				
General Conditions, Overhead and Fee	8.8%	8.8%	\$ 8,780,000	\$ 33.51
Site Improvements	2.6%	2.3%	\$ 2,347,380	\$ 8.96
New Building Composition				
Foundation and Structure	15.5%	13.0%	\$ 13,008,397	\$ 49.65
Roofing	0.8%	0.9%	\$ 870,487	\$ 3.32
Exterior Enclosure	9.7%	13.5%	\$ 13,497,435	\$ 51.52
Finishes	16.1%	14.1%	\$ 14,084,280	\$ 53.76
Equipment	3.0%	5.7%	\$ 5,672,835	\$ 21.65
Conveying Systems	1.3%	0.9%	\$ 870,487	\$ 3.32
Fire Suppression	1.0%	0.9%	\$ 870,487	\$ 3.32
Plumbing	4.6%	4.3%	\$ 4,342,653	\$ 16.58
HVAC	18.5%	17.2%	\$ 17,214,120	\$ 65.70
Temperature Control	3.5%	4.7%	\$ 4,694,760	\$ 17.92
Electrical	11.5%	11.2%	\$ 11,247,862	\$ 42.93
Building Utilities	1.0%	0.5%	\$ 498,818	\$ 1.90
GMP Contingency	2.0%	2.0%	\$ 2,000,000	\$ 7.63
Total	100.0%	100.0%	\$ 100,000,000	\$ 381.68



Controlling the Procedures and Process

Preconstruction Initial OAC Meeting - Have a Script

Proactive approach and communication

Pre-installation conferences - Mock-ups

Field observation visits during construction

Potential pitfalls to avoid during performance of CCA duties

Controlling the Procedures and Process

Sample Agenda Items To Be Discussed At O/A/C Pre-Construction Meeting

I. Schedule O/A/C Site Meetings

- A. Construction Progress Meetings
- B. Site Visits
- C. Monthly Pay Request Meetings

II. Submittal Procedures Per the Project Manual

- A. Contractor's Submittal Schedule
- B. CSI 2004 Master Format Numbering for Identification
- C. Contractor's Review and Approval of Submittals
- D. Number, Size, and Types of Copies
- E. Distribution to Primary Reviewer, Architect and Owner
- F. Turnaround Time of Standard Submittals
- G. Turnaround Time for Large or Complex of Submittals
- H. Submittals put on Hold (to Wait for Coordination of other Submittals)

III. RFI Procedures

- A. Submission
- B. Inclusion of Sub-Contractors Recommendation
- C. Distribution
- D. Responses (Time and Format)

IV. Construction Schedules

- A. Format
- B. Distribution
- C. Updates and Revisions

V. Monthly Pay Requests

- A. Schedule of Values
- B. Certificates of Insurance
- C. Pencil Draw
- D. Stored Materials
- E. Owner's Required Procedures
- F. Final Draw

VI. Project Completion and Closeout Procedures

- A. Substantial Completion
- B. Final Completion
- C. Project Closeout

Preconstruction Initial OAC Meeting - Have a Script

- Be proactive – Opportunity to set expectations and ensure that the process proceeds as intended by proposal for CCA Phase services.
- Develop an agenda of items to be discussed.
- Agreement with the protocols and procedures
- Schedules
- Submittal procedures
- RFI Procedures
- Monthly Application for Payment

Controlling the Procedures and Process

Proactive approach and communication

- Pick up the telephone. Create opportunities for communication.
- Don't wait for a problem or an issue to develop.
- Find out what is going on, what the contractors are looking ahead to.
- Team approach, balance priorities.
- Add value to the Client for the CCA services provided.
- Listen to the client, represent their interests.
- Be an advocate for collaboration

The screenshot shows a project management software interface. On the left, there are two 'FIELD REPORT' forms. The right side features a calendar for March 2006, with dates from the 27th to the 31st. A red box highlights a section of the field report titled 'Action Items'.

Schedule:
 Conformance with Schedule:
 Project appears to be behind based on Schedule (dated 04-03-02)

Action Items: *(General Contractor is to add all itemized "Action Items" to a running list, to be reviewed at the OAC meetings to discuss the outstanding issues and when and how they are completed.)*

Item #	Floor	Description	Action By
16-01	Floor 39	In Unit 3903, FCU-F has a gap between the unit and the plenum. This condition has been noticed on other units in the building but in particular @ the F unit. The gap is large enough to see the components thru. This will undoubtedly create an efficiency and a noise issue. The ductwork contractor will need to remedy this issue.	Walsh
16-02	Floor 34	Copper piping insulation, for chilled water lines, is being installed. As discussed in several MEP coordination meetings, the piping is being installed thru the slab penetrations and over the piping supports. Then fire safing is installed in the sleeve outside the insulation. This is a job well done by the Contractor and needs to be followed through the entire building. It is important to note that, on the lower floors, the fire safing was installed against the piping and not the insulation. These conditions, as also stated in the MEP coordination meetings, will need to be remedied. At the time of this field observation, the lower floors have yet to be corrected.	Walsh
16-03	Floor 27	Unit 2711 balcony has a scupper, as shown in the drawings and is visible from the exterior. The opening on the interior of the balcony is not present. This condition is not evident on the 2611 and the 2511 unit balconies. Walsh will need to provide the scupper according to details if one is not provided @ 2611 & 2511.	Walsh

See Attached Sheet for Photos

The screenshot shows a 'Shop Drawing Schedule' table with columns for Description, Date Due, and Weeks. Below it is an 'Upcoming' section with a list of tasks and their dates.

Description	Date Due	Weeks	
Structural Steel	10/28/2005	11/11/2005	8
Elevation	11/06/2005	11/16/2005	7
General	11/16/2005	11/16/2005	6
Plumbing	11/24/2005	12/08/2005	4
MEP	12/08/2005	12/17/2005	3
Nonferrous Metal	12/08/2005	12/19/2005	2

Item #	Item Description	Date Due	Weeks	
07	Finishing Hardware	12/22/2005	01/06/2006	8
08	Doors	12/28/2005	01/11/2006	1
09	Concrete	12/29/2005	01/14/2006	1
10	Windows	01/02/2006	01/06/2006	3

Controlling the Procedures and Process

Pre-installation conferences - Mock-ups

- Opportunity to work out and avoid potential problems.
- Make sure they occur as they are required by the project specifications.
- The purpose of these conferences is to ensure that the Owner, Architect, Contractor and subcontractor understands the project requirements, the job conditions and the level of service expected.
- The general contractor conducts the meeting. Each participant is to render its expert advice and a consensus is reached to all aspects of the installation.



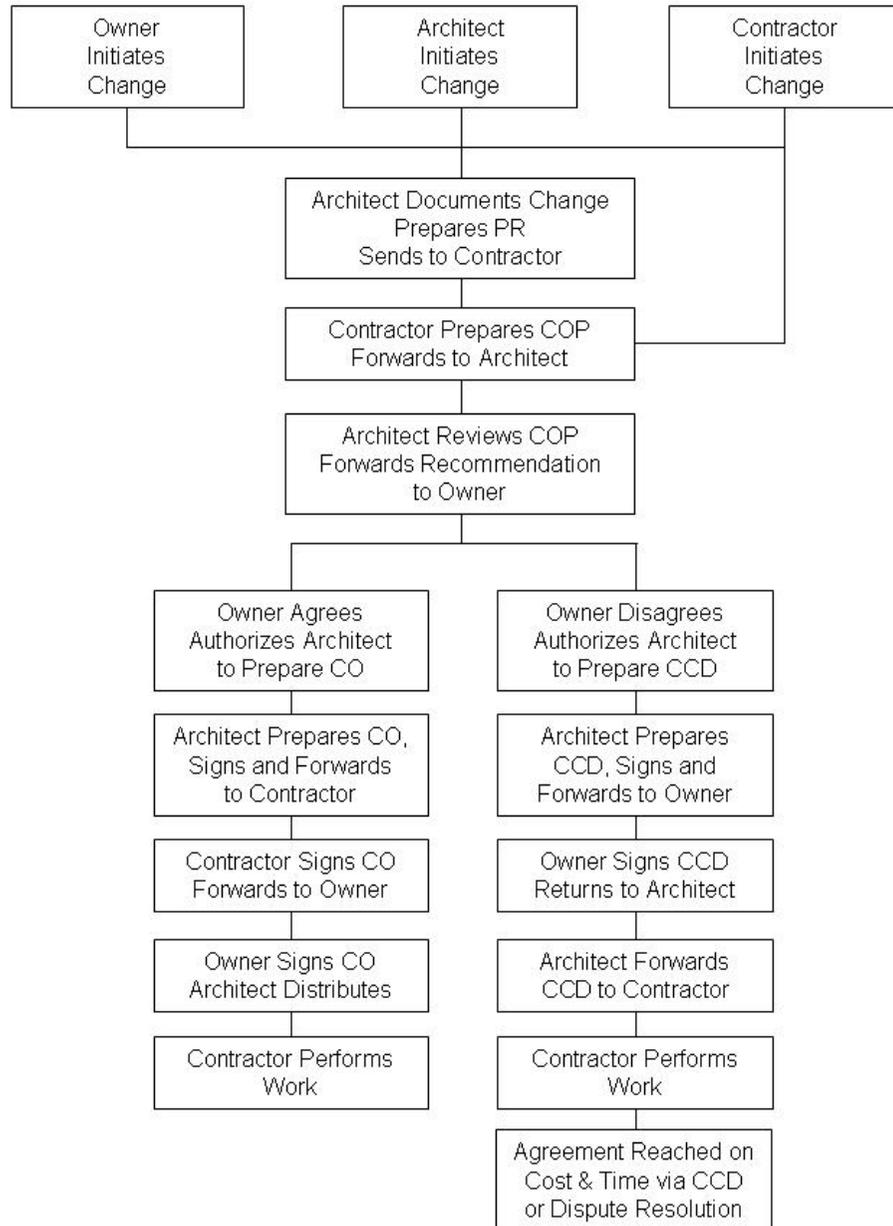
Controlling the Procedures and Process



Field observation visits during construction

- Review the contract, understand these requirements for a given projects.
- Each of the formal site visits should have a purpose and a predetermined agenda.
- Understanding what Architects are not to do during the site observation visits is equally important.
- Understand your role in the different construction phase meetings that may occur coincident with the scheduled site visits.

Controlling the Procedures and Process



Potential pitfalls to avoid during performance of CCA duties

- Not putting the clients interests first
- Inability to identify requests for service outside of or beyond the contractual agreements
- Scope Creep
- Learn when and how to say no.



The Value of Construction Contract Administration Services

Added value should define the broader vision for providing Construction Contract Administration services

- Sustaining and growing our client relationship through the construction phase
- Endeavor to be the trusted advisor
- Learn





SCB SOLOMON CORDWELL BUENZ