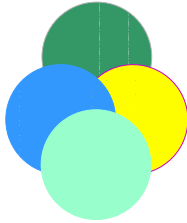


Understanding Project Delivery Methods



Michael Kenig
Chair, AGC Project Delivery Committee
mkenig@holder.com
March 21, 2007



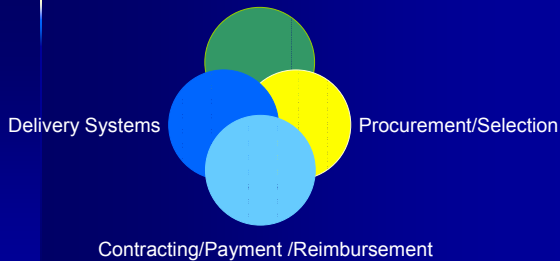
Never Anything New

**“We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.”**

(T.S. Eliot, *Little Gidding*)

Defining Terms

Management Options





How many of you have a list of delivery methods?

How many delivery methods are there?

Do you think your list is the same as everyone else's?



What's a "Project Delivery Method"?

The process of how a project will be planned, designed, and built

OR

Procurement strategy for designing and constructing a facility

OR

Means of contractually communicating expectations and basis of reimbursement

OR

The process of managing how a project will be planned, designed, and built

Project Delivery Systems for Construction

AGC's new project delivery textbook

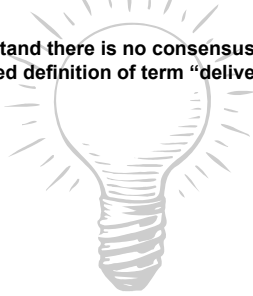
Item No. 2915

(available at www.agc.org now!)



Key Points

1. Understand there is no consensus on a generally accepted definition of term "delivery method"
- 2.
- 3.
- 4.

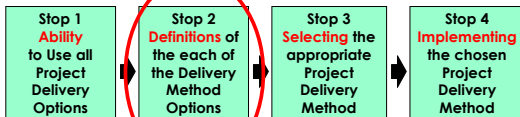


Understanding Your Project Delivery Options OVERVIEW

- Framework (The Four Stops) – AGC textbook
- Delivery vs. Management
- Overview of Typical Delivery Options
- Selection Types and Contracting
- BIM meets Project Delivery!
- Project Delivery Survey of Owners (if time allows)

Introduction

The Four Stops on the Road To Alternate Project Delivery



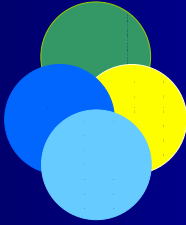
Current state:
Numerous lists,
Numerous definitions
None that are "right"

TODAY'S FOCUS

Defining Terms

Management Options

Delivery Methods



Procurement/Selection

Contracting/Payment /Reimbursement

Project Delivery Systems Table of Contents

Preface

1. Introduction

Management Methods

2. Program Management

3. Agency Construction Management



Delivery Methods

4. Project Delivery Considerations / Related Areas

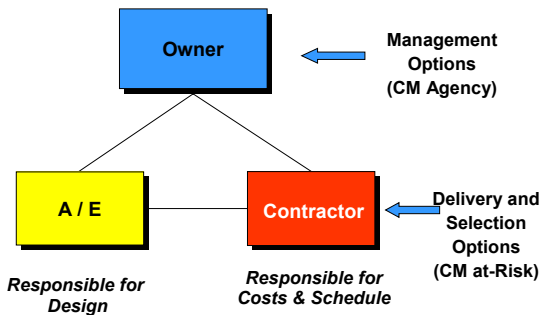
5. Design-Bid-Build

6. CM at-Risk

7. Design-Build

8. Delivery Methods Involving Financing and Operations

Delivery & Selection vs. Management / Oversight



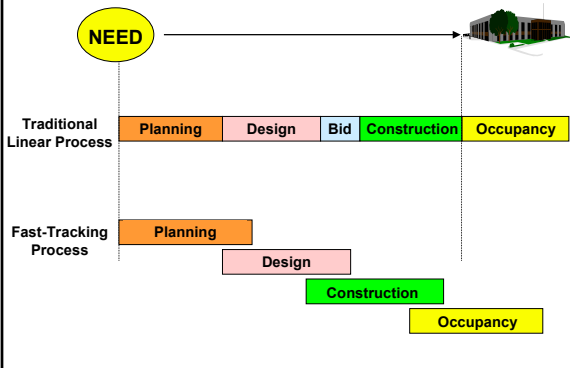
Project Delivery Methods

- Design **Bi** **Bid**
- Design/Build
- CM At **Risk**
- Job Order Contracting
- Multiple Prime Contracting
- Others?



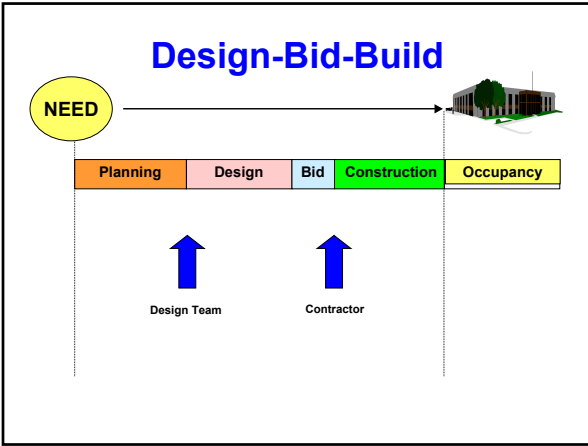
*Doesn't matter ...
just have a list!*

Typical Project Delivery Phases



“What do you call a process where the contractor...”

- is hired separately from design team
 - is hired purely based on qualifications
 - after the design is complete
 - completes the project “cost- plus” (no GMP)?
- ◆ Design **Bi** **Bid**?
 - ◆ GC?
 - ◆ CM Agency?
 - ◆ CM at **Risk**?
 - ◆ Don't have a name?

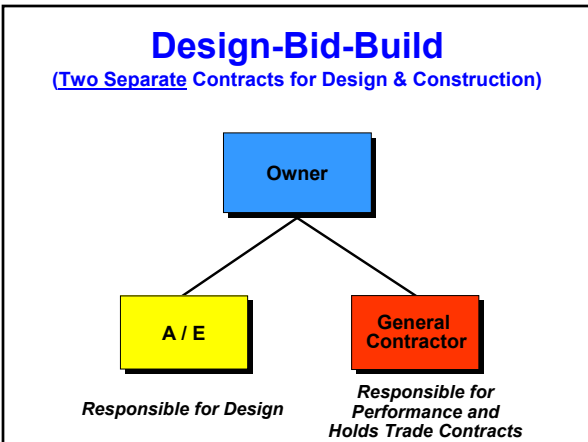


What is Design/Bid/Build?

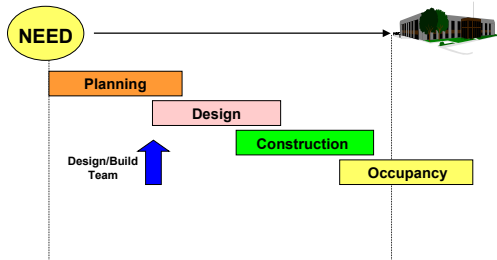
“Defining” Characteristic(s):
(uniquely defines it from other methods)

✓(no consensus)

Linear phases?
Complete set of drawings?
Low bid selection?
Fixed price contract?



Typical Design/Build



Possible Structures of the Design/Build Entity

Design/Build Entity

- Integrated Firm - All services in-house
- Contractor Led (design subcontracted)
- Joint Venture (architect-contractor j.v.)
- Architect Led (construction subcontracted)*

What is Design/Build?

“Defining” Characteristic(s):
(uniquely defines it from other methods)

✓ Single Point of Responsibility

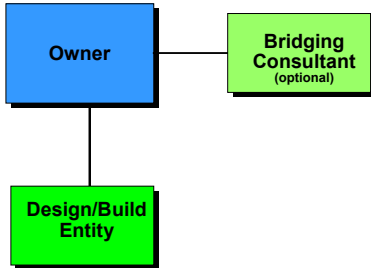
“Typical” Characteristics:

- ✓ Fast Tacking Design/Construction
- ✓ Preconstruction Services
- ✓ Guaranteed Maximum Price/ Schedule



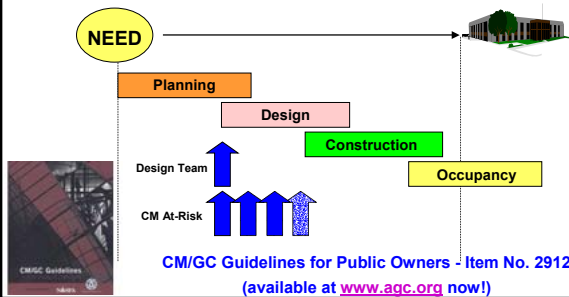
Design/Build

(One Single Contract for Design & Construction)



Responsible for Design, Performance and Holds Trade Contracts

Typical CM At-Risk (CM/GC)



What is CM at-Risk?

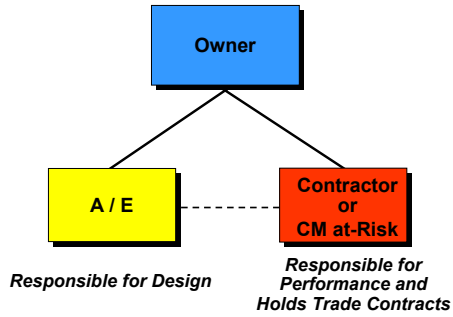
“Defining” Characteristic(s):
(uniquely defines it from other methods)

✓(no consensus)

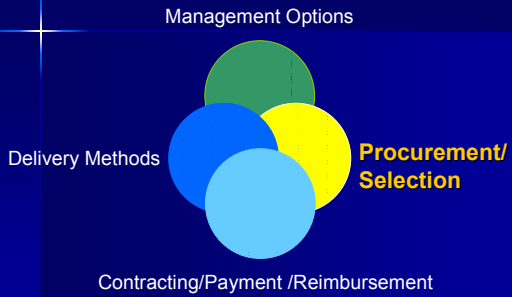
Overlapping phases?
Contractor on board during design?
Qualifications Based Selection?
Guaranteed maximum price (GMP)?

Construction Management at-Risk

(Two Separate Contracts for Design & Construction)



Defining Terms



“Is construction a commodity?”



Having a Consensus on a List

Know the Selection Type, Too!

But first, What is "Price"?

(must define!)

Cost of Work (COW)

+ General Conditions

+ Contractor's Fee

Total Construction Cost

+ Design and Soft Costs

Total Design & Construction Costs

+ Balance of Other Project Costs

Total Project Cost

By "PRICE" do they mean...

- ◆ Total Construction Cost?
- ◆ Contractor's Fees and / or General Conditions?
- ◆ Fees only?
- ◆ Total Design and Construction Costs?

Typical Selection Types



1. Low Bid

- Total Construction Cost, is the only selection criteria.
(Total Construction **weighted 100%**)

2. Best Value Bid

- Total Construction Cost including the Cost of Work is a weighted selection criteria.
(Total Construction Cost **weighted between 0% & 100%**)

3. Qualifications Based Selection

- Cost of Work is not a selection criteria.
(Total Construction Cost **weighted 0%**)

Delivery Method Options – Stop 2 Tool

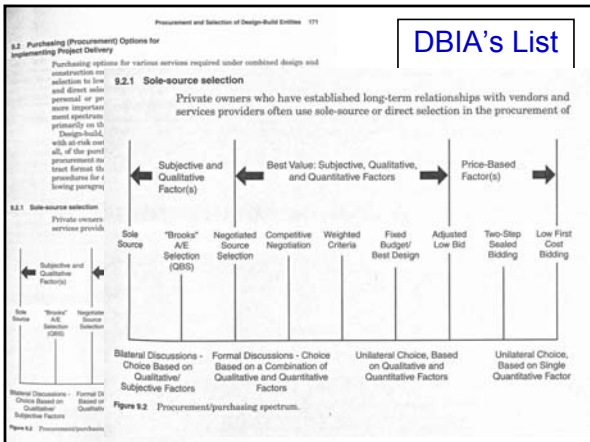
(with Selection Types)

SELECTION TYPES	# of CONTRACTS	
	Designer & Contractor (2 separate contracts)	Design/Builder (1 combined contract)
Low Bid Total Construction Cost is sole criteria for final selection		
Best Value Total Construction Cost and other criteria are weighted factors in the final selection		
Qualifications Based Selection Total Construction Costs are <u>not</u> a factor in the final selection criteria		

Delivery Method Options – Stop 2 Tool

(with Selection Types)

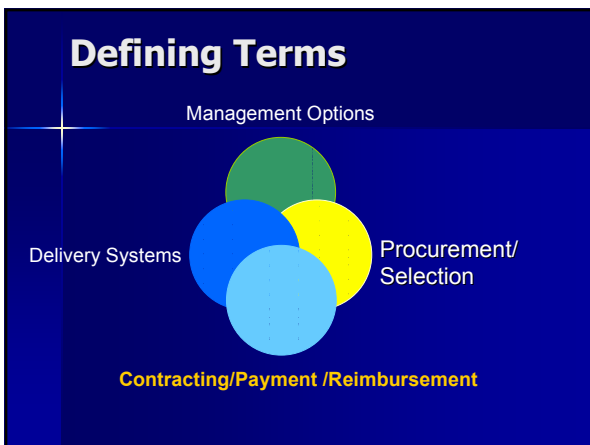
SELECTION TYPES	# of CONTRACTS	
	Designer & Contractor (2 separate contracts)	Design/Builder (1 combined contract)
Low Bid Total Construction Cost is sole criteria for final selection	Design-Bid-Build	Design-Build Competitive Sealed Bid
Best Value Total Construction Cost and other criteria are weighted factors in the final selection	Best Value Bid	Design/Build Best Value Bid
Qualifications Based Selection Total Construction Costs are <u>not</u> a factor in the final selection criteria	CM/GC Competitive Qualifications Proposal	Design/Build Competitive Qualifications Proposal



Contrast “Delivery Method” with Management / Oversight Options

- In-House Resources
- Out-Source
 - CM Agency
 - Program Management
 - Turnkey
 - Including financing & operation/maintenance

Theoretical Possibilities: 36 SELECTION TYPES	HYBRIDS – VARIOUS MANAGEMENT / OVERSIGHT OPTIONS		
	Design-Bid-Build	CM At-Risk	Design Build
Low Bid	In-House Resources CM Agency Program Management Turnkey	In-House Resources CM Agency Program Management Turnkey	In-House Resources CM Agency Program Management Turnkey
Best Value	In-House Resources CM Agency Program Management Turnkey	In-House Resources CM Agency Program Management Turnkey	In-House Resources CM Agency Program Management Turnkey
Qualifications Based Selection	In-House Resources CM Agency Program Management Turnkey	In-House Resources CM Agency Program Management Turnkey	In-House Resources CM Agency Program Management Turnkey



Contracting/ Reimbursement

Defined as:

How the Owner wants to pay for the services provided (GMP, Cost plus, negotiated lump sum)

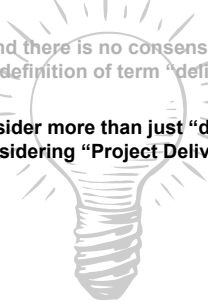
Contrast "Delivery Method" and Management / Oversight Options with Contract Type

- > Firm fixed price
- > Guaranteed maximum price
- > Cost plus fee
- > Time & materials

Theoretical Possibilities: 144 SELECTION TYPES	HYBRIDS – VARIOUS MANAGEMENT OPTIONS and CONTRACT TYPES!		
	Design-Bid-Build	CM At-Risk	Design Build
Low Bid	Firm Fixed Price GMP Cost-Plus T&M	Firm Fixed Price GMP Cost-Plus T&M	Firm Fixed Price GMP Cost-Plus T&M
Best Value	Firm Fixed Price GMP Cost-Plus T&M	Firm Fixed Price GMP Cost-Plus T&M	Firm Fixed Price GMP Cost-Plus T&M
Qualifications Based Selection	Firm Fixed Price GMP Cost-Plus T&M	Firm Fixed Price GMP Cost-Plus T&M	Firm Fixed Price GMP Cost-Plus T&M

Key Points

1. Understand there is no consensus on a generally accepted definition of term “delivery method”
2. **Must consider more than just “delivery method” when considering “Project Delivery”**
- 3.
- 4.



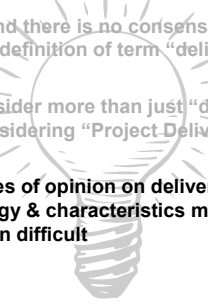
Construction Industry Institute

Project Delivery and Contract Strategy Descriptions

PDCS Number	PDCS Name	Description
PDCS 01	Traditional D-B-B	Serial sequence of design and construction phases; procurement begins with construction; owner contracts separately with designer and contractor.
PDCS 02	Traditional with early procurement and CM	Serial sequence of design and construction phases; procurement begins during design; owner contracts separately with designer, contractor, and supplier project.
PDCS 06	CM @ Risk	Overlapped sequence of design and construction phases; procurement begins during design; owner contracts separately with designer and CM @ Risk (constructor).
PDCS 07	Design-Build	Overlapped sequence of design and construction phases; procurement begins during design; owner contracts with a single entity (designer and CM) for one package; two separate contracts for managing project.
PDCS 08	CM @ Risk	Overlapped sequence of design and construction phases; procurement begins during design; owner contracts separately with designer and CM @ Risk (contractor).
PDCS 07	Design-Build for EPC	Overlapped sequence of design and construction phases; procurement begins during design; owner contracts with Design-Build for EPC contractor.
PDCS 08	Multiple Design-Build	Overlapped sequence of design and construction phases; procurement begins during design; owner contracts with two Design-Build for EPC contractors, one for process and one for facilities.
PDCS 09	Parallel Process	Overlapped sequence of design and construction phases.
PDCS 12	Fast Track	Overlapped sequence of design and construction phases; procurement begins during design; owner contracts separately with designer and contractor.
PDCS 11	Fast Track	Overlapped sequence of design and construction phases; procurement begins during design; owner contracts separately with designer and contractor.

Key Points

1. Understand there is no consensus on a generally accepted definition of term “delivery method”
2. **Must consider more than just “delivery method” when considering “Project Delivery”**
3. **Differences of opinion on delivery method terminology & characteristics make universal discussion difficult**
- 4.

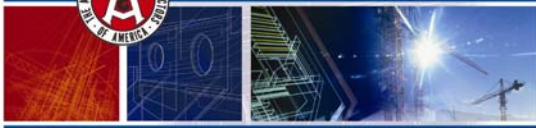


Key Points

1. Understand there is no consensus on a generally accepted definition of term "delivery method"
2. Must consider more than just "delivery method" when considering "Project Delivery"
3. Differences of opinion on delivery method terminology & characteristics make universal discussion difficult
4. Have a list of project delivery options ... and understand the mechanics & constraints of each (in order to select the right one in "Stop 3")



BIM meets Project Delivery



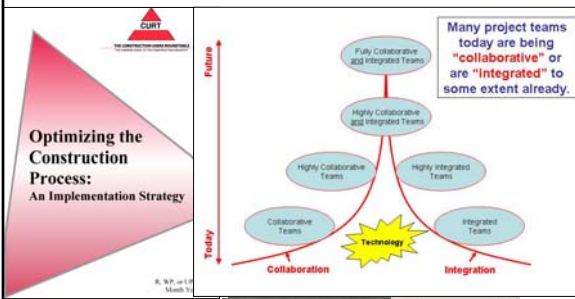
The Contractors' Guide to BIM

September 30, 2006

What is BIM ?

Building Information Model(ing)

✓ A Dynamic New Process



**CONSTRUCTION INDUSTRY
CONTRACTS COUNCIL
(CICC)
Industry Consensus Documents**

Guiding Principles (for drafting):

- Balanced Risk Allocation
- Best Practices
- Consensus Process
- Developing a Full Family of Documents for Each Project Delivery System.

Available Fall 2007!


Endorsers:

- CURT
- COAA
- NASFA
- BOMA*
- AGC
- CIRT
- DBIA*
- ABC *
- EJCDC*
- CMAA*
- ASA
- ASC
- SFAA
- NASBP

*In Discussion


***Project Delivery Systems
for Construction***
AGC's project delivery textbook

- ◆ No "perfect delivery method"
- ◆ Definitions for Selection Types
- ◆ Management vs. Delivery Methods
- ◆ Purpose: A framework for discussions

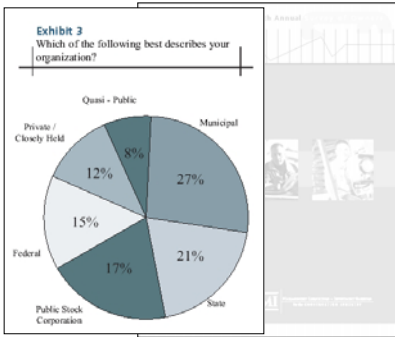


6th Annual FMI/CMAA Survey of Owners

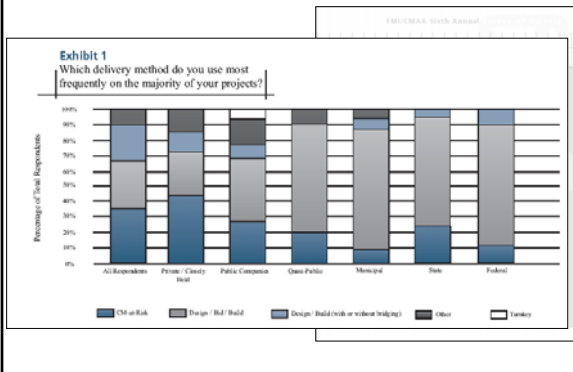
Primary issues surveyed include role of A/E and 'C', collaboration, commissioning, sustainability, and delivery methods



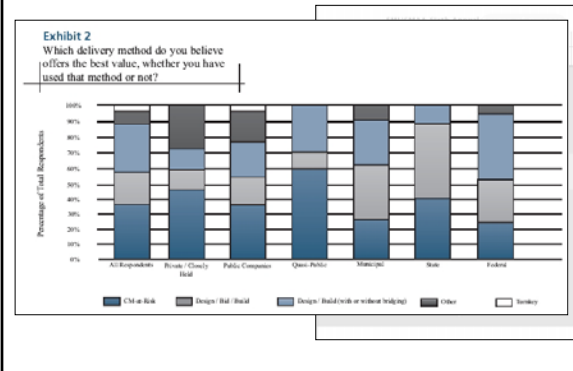
6th Annual FMI/CMAA Survey of Owners



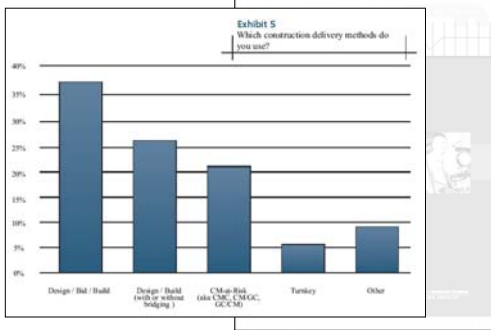
6th Annual FMI/CMAA Survey of Owners



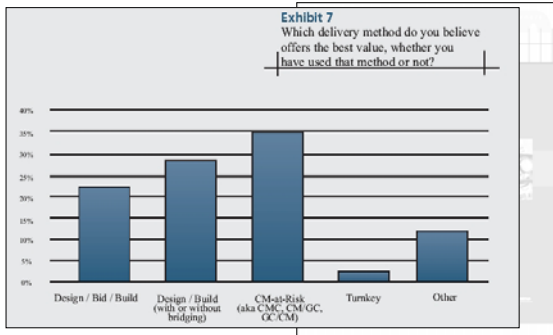
6th Annual FMI/CMAA Survey of Owners



6th Annual FMI/CMAA Survey of Owners



6th Annual FMI/CMAA Survey of Owners



6th Annual FMI/CMAA Survey of Owners

- ◆ Overall most owners still use Design-Bid-Build and 66% use it most often ...
- ◆ ... but only 23% believe it offers the best value
- ◆ Perception of Design-Build offering the best value in the Federal sector



RECAP: Defining Terms

- ❑ **Management Options** (in-house or out-sourced)
- ❑ **Delivery Methods** (DBB, CMR, DB)
- ❑ **Procurement/Selection** (low bid / best value / qualification based)
- ❑ **Contracting/ Reimbursement** (GMP, cost plus, lump sum, ...)



What everyone should know...

- ❑ You can use any _____ method with any _____ method.
- ❑ Delivery and _____ go together.
- ❑ Every organization should have a _____ of their delivery method options.
- ❑ Owners should understand what they consider to be their _____ of delivery method options.

Holder Construction - About Holder - Microsoft Internet Explorer

http://www.holderconstruction.com/

about holder | **services** | projects | careers | news | contact us | site map

About Holder

Our Clients | Quality | Safety | Locations

Reputation
Founded in 1960, Holder Construction Company is a leading provider of entire Planning, Preconstruction and Construction Phases. Our reputation for the highest level of service in the industry is constant and a critical element of our success.

Teamwork
Teamwork is how we manage our projects and our company. Our process of collaborative relationships with our clients and design partners is essential in achieving our founding principle.

"Do the kind of job that makes our clients want us to do their next project."

Products
Our product mix complements the ever-changing economy. We work with both the public and private sectors on experienced building Corporate Headquarters, Commercial Offices, Educational Facilities, Data Centers, Knowledge Centers, Special Use, Hospitality and Interior Projects.

Knowledge and Experience
Whether building a new or renovating an existing facility, count on Holder for the knowledge and experience to get the job done on budget, on schedule

If you would like additional information, go to "Project Delivery"...

Project Delivery Primer: Understanding Project Delivery Options

March 21, 2007

More Questions?



Understanding Project Delivery Methods

March 21, 2007

Michael Kenig
Holder Construction Company
Chair, AGC of America Project Delivery Committee
mkenig@holder.com



SELECTION TYPES	"Price" Definition	Qualifications?	Designer & Contractor 2 separate contracts			
			Price a factor?	TCC a factor?	Fees a factor?	
Competitive Sealed Bid – Low Bid "Price" only criteria for final selection	Total Construction Cost (TCC)	No	Yes	Yes	n/a	Design-Bid-Build Low Bid
Competitive Sealed Proposal - Best Value "Price" and other criteria are weighted factors in the final selection. Price = TCC	Total Construction Cost (TCC)	Yes	Yes	Yes	Yes	?
"Price" = Fees / General Conditions, etc. (no TCC)	Fees, General Conditions, Contingency, Etc.	Yes	Yes	No	Yes	?
Qualifications Based Selection "Price" is not a factor in the final selection criteria	Not Applicable	Yes	No	No	No	CM at-Risk QBS

Summary of Selection Types

	Selection Type	Qualifications	"Price"	Award
1	Competitive Sealed Bid	N/A	Yes (TCC)	Low (responsible) bid for TCC
1A	Bid with Pre-qualifications (Best Value Version I)	Yes	Yes (TCC)	Low bid for TCC of qualified firms only
2A	Competitive Sealed Proposal (Best Value-Version IIA)	Yes	Yes (TCC)	Combination of qualifications and price (TCC)
2B	Competitive Sealed Proposal (Best Value-Version IIB)	Yes	Yes (No TCC)	Combination of qualifications and price (fees, etc.)
3	Qualifications Based Selection (QBS)-Version II	Yes	No	Most advantageous proposal (no price)
