

# Construction Project Delivery Methods

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Structural Systems II

# Construction Project Delivery Methods

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- **Students will:**
- 6. Consult a variety of sources to describe alternatives to traditional project delivery methods, such as the design-build and construction management-related methods, distinguishing among the roles and relationships of various construction personnel in each scenario.
- Examine the project delivery method of an actual company.
- Develop a company profile with supporting graphics the company could share with a client describing the services provided and explaining the project delivery method used by the company.

# Construction Project Delivery Methods

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- **A Brief Comparison of Three Popular Construction Project Delivery Methods**
  - **Design-Bid-Build**
  - **Construction Manager at Risk**
  - **Design/Build**
- **What are the Differences?**

# Construction Project Delivery Methods

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- What's the best project delivery model when you're trying to construct a building?
- The answer depends on your priorities for the project, as well as your own desire for involvement in the process.
- Governing priorities that might tip the decision towards one option or the other include:
  - whether you want to have a minimum of time commitment or a great deal of personal control over the process.
  - whether a collaborative team structure is highly important to you.
  - whether ensuring you get the very most competitive construction bid is the bottom line.

# 1. Design-Bid-Build

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**“THE TRADITIONAL LOW-BIDDER MODEL”**

# Design-Bid-Build

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- In this approach, the design team works directly for the owner, and produces a set of construction documents that are used as the basis of a competitive bidding process.
- One version of this process is known as "Competitive Bids," wherein a group of contractors (pre-qualified or not) submit bids for the scope of work as defined in the contract documents, and the lowest bidder usually gets the project.

# Design-Bid-Build

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- Another version of this process is known as "Competitive Sealed Proposals," wherein a group of contractors submit a proposal to do the work that includes both fees and a presentation of their qualifications, which usually results one of the three lowest bidders getting selected, provided their references and qualifications indicate they will do a good job.

# Design-Bid-Build

- OPPORTUNITIES

- This approach can result in the lowest total construction cost due to the widest-open field of bidding competition.

## DESIGN-BID-BUILD:





# Design-Bid-Build

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- **RISKS / WHAT TO LOOK OUT FOR:**
- General contractor chosen primarily on price, secondarily on qualifications.
- General Contractor is not on board early in the process to give feedback during the design process, to get acquainted with the design team and their intentions, and begin establishing trust as a team member.

# Design-Bid-Build

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- **RISKS / WHAT TO LOOK OUT FOR:**

- This model is particularly susceptible to Change Orders (i.e. cost increases) during the construction process due to the bidders not being available to collaborate with the design team earlier in the process.
- If change orders become contentious during construction, finger-pointing often results, and the design team's documents will be heavily scrutinized for errors & omissions.

# Design-Bid-Build

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- **RISKS / WHAT TO LOOK OUT FOR:**
- Lowest price general contractor is not always the most qualified. Consider GC selection based on qualifications *and* price.
- Not having a contractor on board early in the process may be partially compensated for by hiring a professional cost estimator to conduct milestone price checks to confirm whether the project is on target.
- The delay in selecting a general contractor until construction documents are 100% complete almost always poses an elongated transition of the project from design to start of construction.

## **2. Construction Manager At Risk (CMAR)**

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**“CONSTRUCTION MANAGER AS A TEAM MEMBER”**

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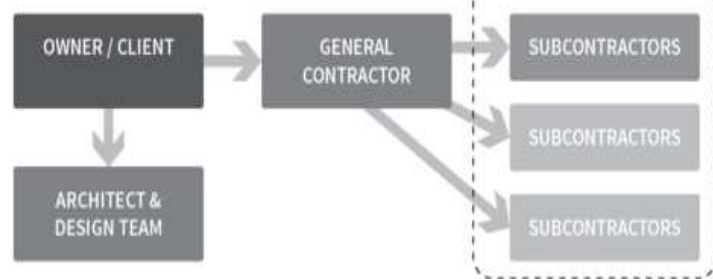
- What if you teamed up with your general contractor at the beginning of the design process?
- This model is called Construction Manager at Risk (a.k.a. "CMAR", or "CM@Risk"), and the idea is that a number of benefits can be seen by forming your team early, such as better cost feedback during the design process, more time for the contractor to thoroughly grasp the scope and details of the project, and more time for the owner, design team, and contractor to develop a mutual sense of understanding and trust prior to the start of construction.
- Some CMAR arrangements include compensation for the contractor's pre-construction services, while other arrangements do not.

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- **OPPORTUNITIES:**

- very good cost estimating at early stages in the project
- can create the best collaborative team structure
- general contractor chosen primarily on qualifications, secondarily on price.
- faster transition from design documents to start of construction.

## CONSTRUCTION MANAGER AT RISK:



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- **RISKS / WHAT TO LOOK OUT FOR:**

- To ensure a competitive bidding process, require multiple bids from subcontractors for all the major disciplines / trades.
- To ensure transparent accounting of project cost, require an open-book policy from your CMAR so that you can see line items for overhead costs, markups, and various contingencies.

# 3. Design/Build

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**“THE TURN-KEY APPROACH”**



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- A totally different approach to project delivery is chosen by some owners who want a single point of responsibility for the whole construction process.
- On a design/build project, the general contractor is that single point of responsibility, subcontracting both the various construction trades as well as the entire scope of design team services.
- From this position, the contractor assumes all responsibility for design outcomes, cost control, and staying on schedule.

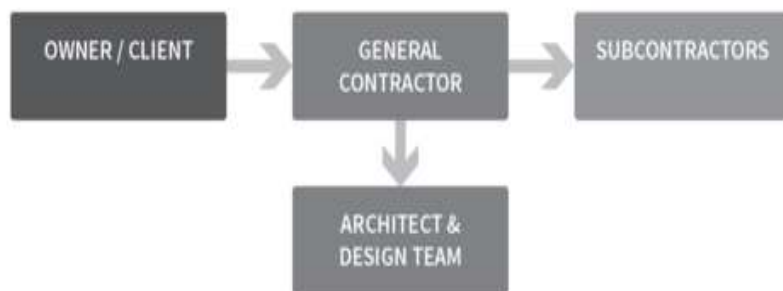
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- **OPPORTUNITIES:**

- Requires minimal time commitment from the owner throughout the process.
- Minimizes owner's involvement in any conflicts between contractor and design team.

## DESIGN/BUILD:



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- **RISKS / WHAT TO LOOK OUT FOR:**

- low transparency in bidding may result in higher prices than if it was competitively bid.
- design team working for the contractor upsets the typical system of checks and balances that ensure a quality end product.
- The design team may have difficulty acting as advocate for the client in opposition to the contractor since the design team is answerable directly to the contractor rather than the client.

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- **Conclusion**

- No matter which of the above project delivery methods you choose for your next project, remember that the strengths/weaknesses of the individuals working on your project will have more of an impact on it than the manner in which you organize your contracts – although both are important.

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- We highly recommend owners thoroughly vet the candidates for the design team and general contractor by comparing their qualifications, and by checking references with a phone call.
- The time invested in checking references is never wasted time. It will not only reveal a lot about the team members you are considering, but it is also an invaluable opportunity to gain the shared wisdom from other owner's past lessons learned.