

Construction Delivery Methods Explained!

Bidding, Construction, Design/Build, Management



You've decided to build; now it's time to consider "how?". To deliver a quality construction project on time and on budget, you must successfully coordinate the efforts of the Owner, Architect and General Contractor in an accepted and appropriate contract form. There are three basic project delivery methods: Design/Bid/Build, Construction Management, and Design/Build. Each method has its own advantages and disadvantages, and some methods are better suited for certain kinds of projects than others.

Design/Bid/Build

This method usually starts with the Owner selecting and entering into a contract with an Architect or other design professional. The Architect fully develops the design and creates "bid documents" that are then made available to general contractors for competitive bids. The bid process can either be an open bid or by invitation. Once a suitable Contractor is selected, the Owner and Contractor execute a separate contract to build. The Contractor, in turn, engages subcontractors and suppliers to perform the work.

The Design/Bid/Build approach is best when the Owner wishes to be actively involved in the design process, requires a fixed cost before commencement of construction, and has sufficient time to permit the design to be fully completed before construction bids are obtained. This

method is often used for very large, complex projects. Since the design is fully developed, an “apples to apples” comparison of multiple bids can be made.

The primary disadvantage of the Design/Bid/Build process is the Architect’s limited ability to establish an accurate cost estimate; consequently, the Owner may not know the cost of his project until the bids are received. If the bids are higher than the budget, costly redesign is often required. Other disadvantages include:

- Owner is responsible for the completeness and accuracy of the Architect drawings
- Contractor has no input regarding more cost-efficient materials or construction methods
- Adversarial relationships can occur between the Architect and the Contractor
- Contractor is forced to use the least cost approach to be low bidder

Construction Management

One variation of the Design/Bid/Build method is to secure the services of a Construction Manager. A Construction Manager At-Risk may be used instead of bidding the project to General Contractors. An Agency Construction Manager acts as an advisor to the client. It is important to understand the “risk shift” inherent in these two Construction Management methods.

The most common form of Construction Management is CM At-Risk, where an independent professional reduces the risk to the Owner because a Construction Manager At-Risk (CMAR) holds the subcontract agreements. Often, the Construction Manager is also the Contractor. Other advantages include:

- Owner is provided advice on budget, schedule, and constructability during design phase
- CMAR can provide value-engineering advice to save client time and money
- CMAR is responsible for schedule and budget
- CMAR typically provides a Guaranteed Maximum Price (GMP)
- Owner knows the Contractor’s profit on the project and any change orders
- Construction can begin without the design being fully completed

Disadvantages:

- This method requires a high level of communication between the Owner and the CMAR
- Requires cooperation of the Architect to work out details of design before or during construction
- Construction costs may run over if design mistakes are not detected early
- Involves negotiation of two separate contracts and requires careful contract language establishing responsibilities of each party

The delivery method referred to as Construction Manager – Agency or CM (Agency) is a fee-based service in which the CM (Agency) acts as the Owner’s representative during each stage of the project. The CM (Agency) is the Owner’s trusted construction expert who advises the Owner and acts as a “go to” person for all aspects of the project including design, constructability, value-engineering, scheduling, negotiations with Architect and Contractors, and qualification of design professionals, Contractors and subcontractors. It is important to note that the CM (Agency) is an advisor, but is not accountable for schedule and budget and that the Owner enters into the trade contracts, not the CM (Agency). Depending on how the contract is structured, the CM (Agency) may be compensated for some general condition items. This agreement places the majority of the risk during construction on the shoulders of the Owner.

Design/Build

In the Design/Build method, the Owner contracts with a single entity to provide both the design and construction of the building. The intent of the Design/Build form of construction is to foster teamwork between the Architect and the Contractor early in the project and facilitate early budgeting, programming, and financing. It also promotes review of the design as it proceeds for constructability and cost of construction. Well-suited for fast-track construction, design/build projects are often more cost-effective and less susceptible to delays in the work than traditional projects.

Perhaps the greatest advantage for the Owner is that the Owner only has to look to one party for the design and the construction. If a problem arises, the Design/Builder is responsible, whether it is a design or construction issue. Because the Architect and the Contractor are on the same team, many Owners observe a reduction in disputes, and insurance companies have noted a reduction in claims with Design/Build projects.

The two primary disadvantages to the Design/Build method are:

- The Owner does not receive the benefit of the system of “checks and balances” that exist when it contracts separately with an Architect and a Contractor
- It is difficult for the Owner to verify that the best price has been achieved for the work

Conclusion

While other less proven delivery methods exist, the three methods described above are most typical. Standard, proven contracts prepared by Association of General Contractors (AGC) and American Institute of Architects (AIA) are available for any of these delivery methods. For further information about the best delivery method for your construction project, contact us at www.van-con.com or 800-216-8696.

Pros/Cons of Design-Bid-Build vs. Construction Manager at Risk vs. Design/Build – What's the Difference?

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Brief Comparison of Three Popular Construction Project Delivery Methods

<http://www.jacksonsgalloway.com/news/2016/4/12/comparing-three-popular-construction-contracting-methods-designbuild-design-bid-build-and-construction-manager-at-risk>

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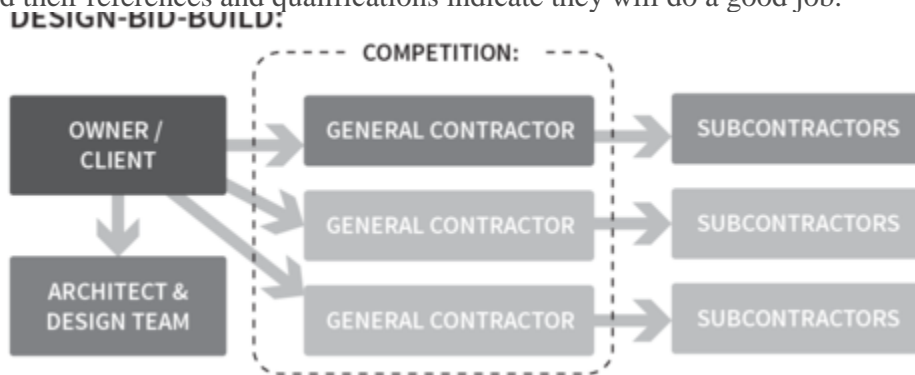
What's the best project delivery model when you're trying to construct a building? Well, the answer depends on your priorities for the project, as well as your own desire for involvement in the process. Governing priorities that might tip the decision towards one option or the other include whether you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

Let's look briefly at three different ways to organize the contracting on a construction project. This study is by no means exhaustive, but is rather intended to give owners a brief orientation on the topic.

1. Design-Bid-Build

“THE TRADITIONAL LOW-BIDDER MODEL”

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. 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.



OPPORTUNITIES:

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

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.
- 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.

- 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)

“CONSTRUCTION MANAGER AS A TEAM MEMBER”

But 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.



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.

RISKS / WHAT TO LOOK OUT FOR:

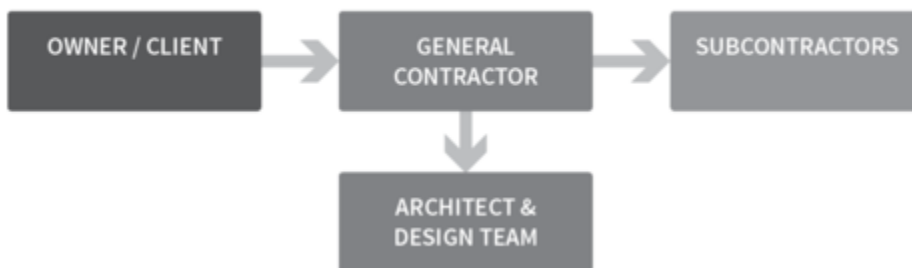
- To ensure a competitive bidding process, require multiple bids from subcontractors for all the major disciplines / trades.
- To ensure transparent accounting of project cost, require an open-book policy from your CMAR so that you can see line items for overhead costs, markups, and various contingencies.

3. Design/Build

“THE TURN-KEY APPROACH”

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.

DESIGN/BUILD:



OPPORTUNITIES:

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

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.

In 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. 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.