

ALTERNATIVE CONTRACTING METHODS

- Conventional Design-Bid-Build
- Design/Build
- Negotiated General Contractor

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CONVENTIONAL DESIGN-BID-BUILD

The most traditional method of delivery of a construction project is that where the Architect, after selection by the Client, totally completes the design documents which are then distributed to General Contractors for bidding. Usually, the low bidder is selected to construct the project, and enters into a lump sum type contract agreement directly with the Owner. During construction, the Architect typically maintains a strong administrative role and is the focal point of most communication on the project between the Contractor and Owner.

While proponents of this method of contracting feel that the lowest overall initial costs are obtained through pure competitive bidding, an adversarial relationship between principal parties can develop; making the administration of changes more difficult, time consuming and costly. Perhaps the biggest potential problem with this approach to a major, complex construction project is that the Owner does not obtain a firm handle on construction costs until the project has been bid, which may require re-design to address the budget problem.

The conventional design, bid, build approach is also typically one of the longest in overall duration and for an accelerated or "fast-tracked" schedule, the project must be designed, bid and awarded in phases.

PROS

1. Costs may be lower due to competition.
2. Project design is typically complete prior to start of construction.
3. Owner receives a single lump sum proposal for the entire project not subject to cost escalation.
4. This approach conforms most directly to public bidding laws.

CONS

1. If bids exceed budget, the project may require re-design.
2. Difficult to fast-track or pre-order materials, resulting in later Owner occupancy.
3. The General Contractor may be in an adversarial relationship with the Owner and Architect/Engineer.
4. Prices for change order work are typically higher and more difficult to control.
5. A selected bid list can be made, but the Owner cannot actually select the contractor or subcontractors.

VARIATIONS

Project may be released for bidding and constructed in phases to reduce schedule. Contractors can be prequalified before being allowed to bid the project.

Under a design/build arrangement, the Owner obtains both design and construction services from a single entity, thereby having a single point of responsibility for all phases of the work.

The Owner or hired consultant must prepare a detailed project program and quality requirements (Bridging Documents) for the Design/Build team to use in establishing a project cost.

Major benefits experienced by Owners utilizing the design/build approach are that the design and construction services are “streamlined” and that having one responsible entity ensures that required construction components don’t fall through the cracks. (However, building elements not identified in the Bridging Documents will have an extra charge added after the contract is signed.) Some Owners, however, are uncomfortable with the design/build approach because it lacks a system of “checks and balances” in an arrangement where the Architect and Contractor are independent.

It is for this reason that many Owners using the design/build approach feel it is necessary to employ a separate building consultant to inspect the plans, specification and construction and to review estimates, change order proposals and payment requests furnished by the design/build firm. In addition, there is the problem of integrating the Owner’s special consultants in the design process as well as some confusion over the extent to which the Owner participates to assure the function and quality of the finished product.

With thorough Bridging Documents and a professional and responsible team, the design/build process can be one of great success.

PROS

1. Single prime responsibility for design/construction of total project.
2. Construction cost and schedule and methods are controlled by a single entity.
3. Value engineering is performed by design/build entity and implemented to provide the most cost effective solutions for systems and materials used on project.
4. Enables project to proceed on a phased schedule, reducing overall schedule.
5. Competitive bidding is retained.

CONS

1. Owner may require a separate building consultant to provide Bridging Documents and an appropriate system of checks and balances to monitor design and costs.
2. Criteria for project would have to be generally pre-established, which may expose Owner to substantial change orders.
3. Some Owners have difficulty integrating their input into the design of the project because of pre-established criteria and no direct relationship with the Architect.
4. The quality of the project may be diminished through design/build efforts to maintain the established cost.
5. Owner may not be able to control cost of additional work (would have to rely solely on design/build contractor).
6. Selection of design/build entity can be difficult to manage under competitive bidding laws, particularly for large, complex projects.

VARIATIONS

Design/build services may be provided by a specialty firm having all service in-house or by a consortium of Architect, Engineers and General Contractor.

On many construction projects, particularly in the private sector, a General Contractor is hired on the basis of his knowledge, experience, resources, assigned personnel and fee to participate in the project during the design phase as well as during construction. Under this arrangement, the General Contractor can provide services such as estimating, cost analysis, scheduling, value engineering, etc.

During the construction phase, the negotiated General Contractor operates in a more conventional role, usually performing certain trade work with his own construction forces. However, here too the Contractor, Architect and Owner function more as a collaborative team than under a more conventional competitively bid process.

A major benefit to the negotiated General Contractor approach is that under the disciplined scheduling of the General Contractor, the project may be phased or "fast-tracked" whereby the design and construction periods are overlapped to permit an earlier start and completion of construction. The Owner will typically require the General Contractor to provide a Guaranteed Maximum Cost (GMC) for the project prior to the start of any construction work and thereby the Owner can receive a commitment on cost at an earlier date than under conventional design/bid/build delivery.

PROS

1. Construction costs are identified and predicted reliably during the design phase. Team interacts related to construction cost, completion schedule and quality work to maximize Owner's value.
2. The General Contractor contributes to a synergistic team approach in the Owner's interest.
3. Value engineering can be done at a time when its results can be most easily incorporated into the design. Major design decisions can be made on the basis of complete information.
4. Construction cost established early can facilitate financial planning and avoid potential delays for re-design.
5. All records, books and estimates are "open book".
6. Prudent buying and value engineering with trade contractors results in cost savings reverting to the Owner, not the General Contractor.
7. Competitive bidding is retained on all work, except a portion of that which the General Contractor may perform with his own forces.
8. Flexibility to pre-quality trade contractors for better control of schedules and costs.
9. The General Contractor, who is responsible for costs, schedule and quality, can be selected based on knowledge, experience, performance record and fees.
10. Schedule is controlled during the design phase to ensure that design efforts are integrated with construction phase requirements.
11. Facilitates fast-track or phased construction, providing earlier completion.
12. Single prime responsibility for construction.
13. No additional Owner personnel required to monitor construction.
14. Ability to pre-order long lead items.

NEGOTIATED GENERAL CONTRACTOR (cont.)

CONS

1. If a phased approach is use, the project may not be fully designed at start of construction which may expose Owner to change orders. This potential is inherent in any form of fast-track construction, but can be controlled to a minimum.
2. Difficult to arrange within structure of public bidding laws on public sector projects.
3. Some contractors who claim to have expertise in services similar to construction management do not.
4. The General Contractor cannot be considered an agent of the Owner in a pure sense and may not be viewed as to having the Owner's interests as a priority.
5. The General Contractor may hold too much contingency, causing elements to be taken out of the project.

VARIATIONS

The General Contractor may automatically be permitted to undertake work with own forces, or may be required to take bids from other contractors. Timing of introduction of the General Contractor to the project varies considerably. The General Contractor should be added to the team as early as possible to maximize benefits.