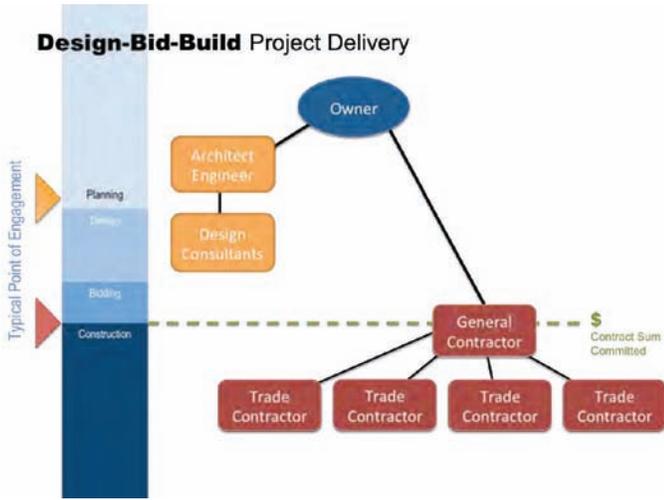


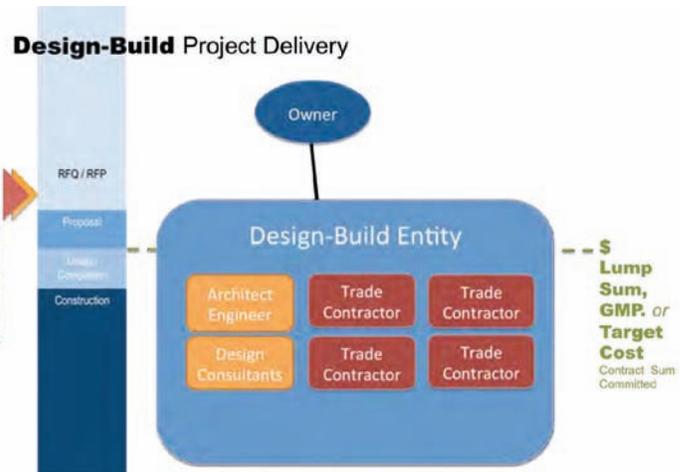
DELIVERY METHODS DEFINED

Construction Management at Risk (CMR) (also called CM at-Risk or CM/GC) – This delivery method entails a commitment by the CMR for construction performance to deliver the project within a defined schedule and price, either a fixed lump sum or a guaranteed maximum price (GMP). The CMR provides construction input to the owner during the design phases and becomes the general contractor during the construction phase.

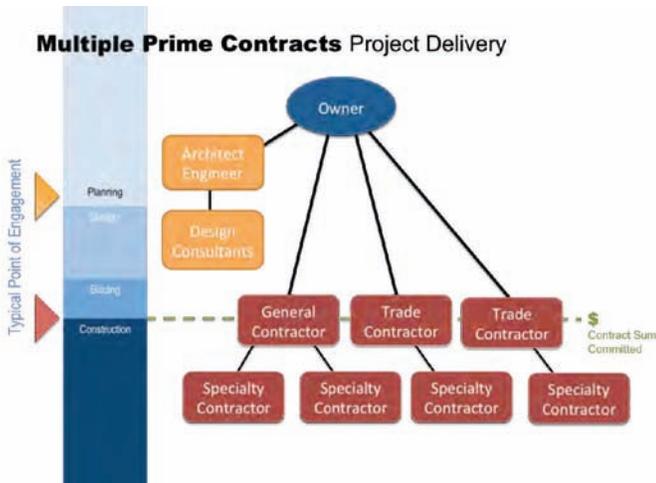
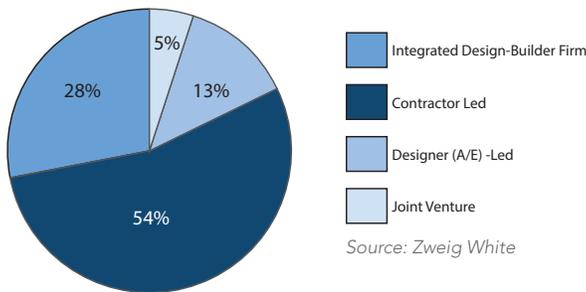


Design-Bid-Build (DBB) – The traditional U.S. project delivery method typically involves three sequential project phases: The design phase, which requires the services of a designer who will be the “designer of record” for the project; the bid phase, when a contractor is selected; and a build or construction phase, when the project is built by the selected (typically low bid) contractor. This sequence usually leads to a sealed bid, fixed-price contract.

Design-Build (DB) – This method of project delivery includes **one** entity (design-builder) and a **single** contract with the owner to provide both architectural/engineering design services and construction.



DESIGN-BUILD ENTITY STRUCTURAL AGREEMENTS



Multi-Prime (MP) – Although similar to design-bid-build relative to the three sequential project phases, with MP the owner contracts directly with separate specialty contractors for specific and designated elements of the work, rather than with a single general or prime contractor.

KEY CONSIDERATIONS WHEN CHOOSING DELIVERY METHODS:

Construction Management at Risk (CMR)

- Three linear phases: design, bid, build or may be fast tracked.
- Three prime players: owner, designer and CM-constructor.
- Two separate contracts: owner to CM-constructor and owner to designer.
- Owner warrants the sufficiency of the plans and specs to the CM-Constructor:
 - Owner is responsible for the “details” of design.
 - Owner is liable for any “gaps” between the plans and specs and the owner’s requirements for performance.

Key Considerations:

- Designer works directly for owner.
- The owner gains the benefit of having the opportunity to incorporate a contractor’s perspective and input to planning and design decisions:
 - More professional relationship with contractor.
 - Earlier knowledge of costs.
 - Earlier involvement of constructor expertise.
- Project delivery typically faster than traditional design-bid-build.
- A primary disadvantage in CMR delivery involves the lack of direct contractual relationship between the contractor and designer, placing the owner between those entities for the resolution of project issues:
 - Disagreements regarding construction quality, the completeness of the design, and impacts to schedule and budget may arise.
 - As with the design-bid-build system, adversarial relationships may result.

Design-Bid-Build (DBB)

- Three linear phases: design, bid and build.
- Three prime players: owner, designer and contractor.
- Two separate contracts: owner to designer and owner to contractor.
- Owner warrants the sufficiency of the plans and specs to the contractor:
 - The contractor is responsible to build the project as designed.
 - The designer is responsible to design to the professional standard of care.
 - Owner is responsible for any “gaps” between the plans and specs and the owner’s requirements for performance.

Key Considerations:

- This method is widely applicable, well understood, and has well-established and clearly defined roles for the parties involved.
- This method is presently a very common approach for public owners due to procurement statutes under which they operate.
- The owner has a significant amount of responsibility for the success or failure of the end product, particularly since the facility’s features are fully determined and specified prior to selection of the contractor (Owner “owns” the details of the design).
- The contractor works directly for the owner.
- The designer works directly for the owner.
- Process may have a longer duration when compared to other delivery methods since all design work must be completed prior to solicitation of the construction bids.
 - Construction may not begin until the design and procurement phases are complete.
- The absence of construction input into the project design may limit the effectiveness and constructability of the design. Important design decisions affecting the types of materials specified and the means and methods of construction may be made without appropriate consideration from a construction perspective.
 - There is no contractual relationship between the contractor and the designer.
 - There is no opportunity for collaboration during the design phase.

- The owner generally faces exposure to contractor change orders and claims over design and constructability issues since the owner accepts liability for design in its contract with the contractor.
 - Change orders: owner is liable for any “gaps” between the plans and specs.
- This traditional approach may promote adversarial relationships rather than cooperation and coordination among the contractor, the designer and the owner.

Design-Build (DB)

- Integrated process: overlapped design and construction – typically fast tracked.
- Two prime players: owner and design-build entity.
- One contract – owner to design-builder with single point of responsibility.
- Entity can take on many forms including:
 - Integrated design-build firm;
 - Contractor led;
 - Designer led;
 - Joint venture; or
 - Developer led.
- The design-builder is responsible to design and construct the project to meet the performance standards set forth by the owner in the contract.
- With respect to any prescriptive designs or specifications, the design-builder is responsible for discovering any inconsistency between the prescriptive requirements and the performance standards and the owner remains responsible for the cost to reconcile the inconsistent standards.

Key Considerations

- Cost efficiencies can be achieved since the contractor and designer are working together throughout the entire process:
 - Fewer changes, fewer claims and less litigation.
 - Earlier knowledge of firm costs.
 - Change orders typically limited to owner changes.
- DB can deliver a project more quickly than conventional DBB or CMR.
- Owner can, and should, specify performance requirements in lieu of prescriptive specifications.
- Ability to enhance project coordination.
- Ability to reduce project claims.
- DB team qualifications are essential for project success; owner must be willing to place a heavy emphasis on the qualifications portion of the selection process.
- Owner must be willing to allow the DB team to handle the design details.
- Owner's entire team must make the “mental shift” to a different way to deliver their project.

The preceding pages are an excerpt from from "Choosing a Project Delivery Method a Design-Build Done Right Primer".

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