

Design-Build

An Approach to Project Delivery

Project & Lands Committee Meeting
November 9, 2011

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Chief

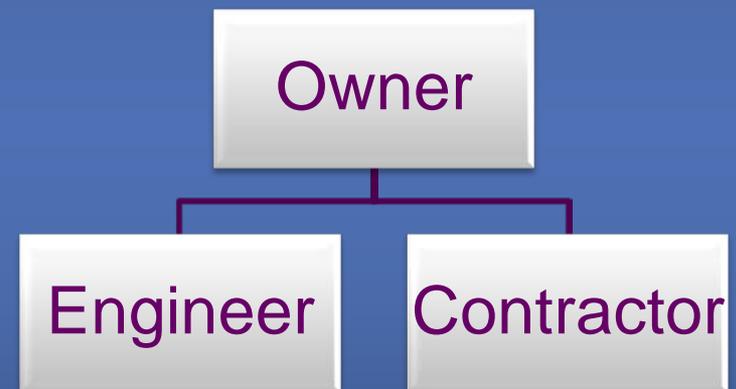
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Design-Bid-Build (current approach)

- An Architect/Engineer provides project design and construction documents
- The construction contract is awarded to the lowest bidder (general contractor)
- The Owner administers the contract
- A tried and true delivery method



Design-Bid-Build

- Advantages
 - Widely recognized approach
 - Freedom to select consultants
 - Competitive bidding
 - Standard contractual relationships



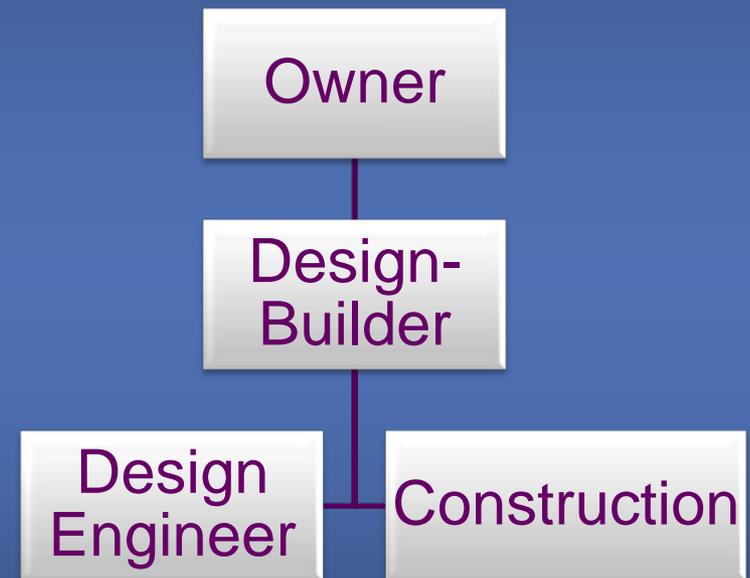
Design-Bid-Build

- **Disadvantages**
 - High investment before total project cost is known
 - General contractor retains any/all contingency
 - Prone to costly claims and/or change orders
 - General contractor qualifications often minimized (i.e. past experience, financial capability, safety performance, resource availability)



Design-Build

- Also known as design-construct, single responsibility, turnkey and EPC
- After project criteria are established, a single resource is retained and held accountable for conceptual design and construction
- It is not a new process



Design-Build

- **Advantages**

- Innovative team solutions
- Single source responsibility
- Clear communications
- Early guarantee of costs
- Eliminates change orders from design errors and omissions
- Continuity of delivery team



Design-Build

- **Disadvantages**

- Architect/Engineer is not an “agent” of the Owner
- Concerns that cost pressure will compromise quality/design
- Concerns of special builder interests may drive design approach



Why Utilize Design-Build?

- Innovation
- Risk shifting
- Price guarantees
- Lower costs
- Smaller staffs
- Reduced litigation



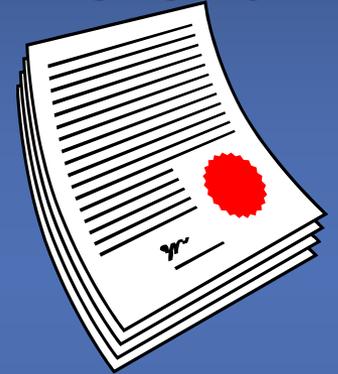
Determine the Approach

- Successful projects are delivered using all types of delivery approaches
- The delivery approach is selected for the project
- Can't fit the project to the delivery approach.



Keys to a Successful Design-Build Project

- Recognize that at-risk delivery is different
- Pre-qualify bidders
- Conduct a balanced evaluation
- Ask for reasonable submission requirements
- Develop succinct conceptual documentation
- Limit the design required in the RFP
- Conduct separate evaluation of cost and qualitative issues



Design-Build Procurement Options

- **Competitive selection**
 - Weighted criteria
 - Adjusted low bid
 - Equivalent design/low bid
 - Fixed budget/best design
 - Meets criteria/low bid
- **Negotiated**



Conceptual Documents

- You need to know what you really want early in the process
 - Performance characteristics
 - Specific materials and equipment to be installed
- Define level of quality for the project
 - This needs to be done for each system



Common Misunderstandings

- A reasonable effort is needed for project scoping
- Not all project problems go away
- Elimination of design-related change orders is not the same as “no change orders”
- The engineer’s professional responsibility does not change



Example of a Potential Application:

L-8 Reservoir Pump Station

- Due to the nature of the L-8 Reservoir Pump Station Project, potential installation methods vary widely and will likely become the main drivers in the project delivery cost.
- Atypical project features include:
 - Depth of excavation
 - Dewatering challenges
 - Hardness of limestone
 - Variety of potential foundation systems



Design-Build Approach

Questions?

