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## **PROJECT DELIVERY – DESIGN – BID - BUILD**

1. It is determined that a definite need exists that must be filled.
2. A determination is made of what the budget for the project will be. This budget can be determined a number of ways, ranging from an actual estimate using current market data applied to a complete scope of work, to a guess based on average square foot costs. Usually it is limited to monies that can be made available.
3. After the budget parameter has been determined, a site is usually picked, often without an assessment from design or construction professionals as to suitability.
4. A selection process is then gone through to determine which design firm will spearhead the process of designing the facility.
5. An assessment of current and future needs should be made to insure the site is used in such a way the existing project does not hinder future growth.
6. The designer then creates a program based on current and future needs, wishes, budget, code requirements, site constraints, utilities, etc., and presents it to the Owner for confirmation of parameters that must be met.
7. Upon approval of the parameters, a preliminary design is established to the satisfaction of both parties using construction methods and materials the designer feels are most suited to the building requirements. These preliminary drawings are usually sufficient to determine the larger scope of the project and include site plans, floor plans, exterior building elevations, and sometimes building sections.
8. At this point, sometimes a preliminary budget estimate is made by the designer, often using a square foot cost estimate based on best guess of market conditions.
9. Upon approval of the preliminaries, design of building systems begins, structural design begins to be finalized, building details begin to be worked out, and the overall design is tweaked to accommodate system requirements. Schedules are developed for finishes, doors and window selections, etc. This phase is called the design development phase and at the end of this phase, most or all of the decisions required from the Owner have been obtained and incorporated into the drawings. Outline specifications of materials chosen are usually created by the end of this phase. At this point, the preliminary estimate can be refined, using better square foot estimates obtained from national cost data providers.
10. Upon approval of the design development drawings, work proceeds on the completion of construction documents, including drawings detailing the quantity of materials, specifications detailing the quality of materials to be included, and bid forms to be used.
11. Upon approval of the construction documents, the project is put out for bid. There is normally a time period to allow bidders to respond to the public or private invitation, obtain sets of documents, and briefly review them. Then a pre-bid meeting is held with all willing participants to clarify questions that may have come up in review of the drawings. The drawings may need to be revised at this time to resolve any ambiguities. A date is set at which all bids are due. A public opening may or may not be required. Contractors determine the cost of the Work to be performed by their labor force, obtain costs of materials and Work to be performed by subcontractors, total these, add on a percentage of actual costs to cover their project management fee, and add overhead costs to cover equipment, trailers, guarantees, etc., to arrive at a bid price.

12. During the last portion of the time frame for bidding, bidders normally call with many questions unanswered by the documents or with suggestions for possible cost savings. If there is enough time, clarifications called addendums to the construction documents are issued to all bidders detailing changes to what is being bid, so all bidders maintain the same advantage. Normally, suggestions for savings are not volunteered unless the contract is awarded to a company and they can negotiate savings after the fact, tailored to the subcontractor's advantage.
13. When the bids come in, generally they are opened publicly and the numbers become the knowledge of all of the other bidders. After the bidders are dismissed, the bids are tabulated by the Owner and Designer in a comparison chart to try to determine if the bids are truly comparable.
14. After bids are tabulated, the apparent low bidders, most likely to be subcontractors who made the worst mistakes bidding, are called and asked to come sign contracts for their portions of the Work. If changes are needed and negotiated after that point with the apparent low bidders, they will not come as cheaply as the first time through the process.
15. If the total cost is not within the budget, which is sometimes the case, the project must be redesigned to lower the cost or portions of the project must be removed from the scope and left undone. Then the whole project must go through the bid procedure, but this time, everyone has everyone else's price. Some subcontractors won't even bid the second time. Bids that were low will usually be higher.
16. Once a bid price and a project scope are determined, the Designer usually assists the Owner in establishing contracts with the Contractor and the Work commences.
17. During the Work, the Designer usually acts as an observer of the Work on behalf of the Owner to help assure Work is being done in accordance with the contract documents, bid documents, specifications, and acceptable construction practices. Changes to the scope of the Work of price or time are documented by the Designer for the Owner. Pay requests are also sometimes verified by the Designer before being released for payment to the Owner.
18. When the Contractor feels the project has been substantially completed, the Designer normally reviews the Work with the Owner and creates a punch list of items still felt to be deficient, needing correction before the Owner takes possession of the Work.
19. After the Work has been completed, the Designer normally reviews the Work, again with the Owner, to make sure all punch list items have been completed before authorizing final payment.

#### ADVANTAGES OF DESIGN-BID-BUILD

1. There is a built-in check and balance system to basically protect the Owner's and Contractor's rights if the Designer acts as an arbitrator between them.
2. It is a familiar process to which all are accustomed.
3. The Owner typically perceives the Designer is on their side to protect them from being taken advantage of.
4. It is perceived this process will result in a good guaranteed price as a by-product of the competitive process.

#### DISADVANTAGES OF DESIGN-BID-BUILD

1. The Designer is usually perceived as partial to the Owner because that is who is paying them. The relationship between the Contractor and the Owner is perceived as adversarial.
2. Whose fault is it, i.e., who pays for redesign, if the project comes in over budget due to the Owners' needs or wants being unaffordable, or the Designer guessing wrong about

- current market conditions? Only those actually doing the Work can determine what they will charge.
3. A tremendous amount of time and potentially money for redesign fees can be lost in the bid, redesign, and re-bid processes if the budget does not match the cost. This time spent results in needs that remain unmet, additional cost as inflation continues to push up costs of labor and materials. In the meantime, additional cost for other facilities and their rental, maintenance, and utilities reduces available funds.
  4. The budget and design are often reconciled in the field through the use of change orders, a process usually distasteful and financially detrimental to Owners.
  5. When something goes wrong and a problem can not be solved, there are three sets of fingers pointing in all directions as to the source of the problem.
  6. When the project delivered is not the project hoped for because of budget compromises, no one is truly happy with the end result. It does not meet all of the expectations generated before the initial bid opening.