

# Bidding & Contract Negotiation

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# Bidding & Contract Negotiation

## Introduction

By completing the activities in this chapter, you will gain an understanding of the field activities involved in bidding and contract negotiation. The following information is taken from the NCARB IDP Guidelines:

### Bidding and Contract Negotiation

Minimum Bidding and Contract Negotiation Experience: 120 Hours

Definition: Involves the establishment and administration of the bidding process, issuance of addenda, evaluation of proposed substitutions, review of bidder qualifications, analysis of bids, and selection of the contractor(s).

### Tasks

At the completion of your internship, you should be able to:

- Conduct or participate in bidding/negotiating phase
- Evaluate product and material substitutions
- Prepare bid documents including addenda

### Knowledge Of/Skill In

- Conflict resolution
- Construction procurement (e.g., bidding, negotiating)
- Contracts (e.g., professional services and construction)
- Interpreting construction documents
- Oral and written communications
- Product and material substitutions
- Project delivery methods

## resources

Download the current Intern Development Program (IDP) guidelines at [www.ncarb.org/Experience-Through-Internships.aspx](http://www.ncarb.org/Experience-Through-Internships.aspx).

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The American Institute of Architects. Demkin, Joseph A., ed. *The Architect's Handbook of Professional Practice*. 14th ed. Hoboken: John Wiley & Sons, 2008.

- Part 4 - Contracts and Agreements

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The American Institute of Architects. Demkin, Joseph A., ed. *The Architect's Handbook of Professional Practice*. 13th ed. New York: John Wiley & Sons, 2001.

- Chapter 11 - Contracts and Agreements

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The American Institute of Architects, *The Architecture Student's Handbook of Professional Practice*. 14th ed. Hoboken: John Wiley & Sons, 2009.

- Part 4 - Contracts and Agreements

## Narrative

The architect's duties in contractor selection may appear relatively minor in comparison to the architect's role in design and construction. However, the architect's role in contractor selection is pivotal in terms of establishing sound working relationships, limiting liability to the owner and the architect, and treating contractors fairly.

An increasingly complex design and construction environment necessitates consideration of modes of project delivery that differ from the traditional design-bid-build approach. Certainly, the recent advances in integrated project delivery provide powerful new alternatives to the traditional construction process. No matter what project delivery approach is used, however, contractor selection criteria and procedures should be clear, sound, and strictly adhered to, particularly in publicly bid work. In addition, the owner needs to be informed of the implications of straying from the rules. Attention to detail and the importance of communication should enable a smooth transition from design to the construction phase, or merging of the two project increments, and optimize the chances of achieving a successful project.

Bidding and contract negotiation are two distinct steps in traditional contractor selection. While these may constitute only a small portion of an architect's overall services, they are a critical bridge between design and construction. Even the best design and most accurate and complete construction documentation cannot ensure success. After all, someone needs to turn the ideas represented in the construction documents into a three-dimensional physical reality. Ultimately, it is the quality of the contractor(s) and the quality of the working relationships among the owner, contractor, architect, and their subcontractors and consultants that will determine just how successful a project will be. Thus, the means used to select a contractor is a critical issue that needs to be addressed as early as possible with the client. The selection process lays the groundwork for the realization of the project and the relationships among the parties involved in the construction process.

Traditionally, contractor selection has followed a design-bid-build strategy, which separates design and construction into distinct increments and limits the choice of a contractor on the basis of lowest cost. Design-bid-build works well for a wide variety of projects of all sizes and is still widely used in the construction industry. In this project delivery method, the owner establishes one contract with the architect for design services and another with a builder (or perhaps several separate contractors each with prime contracts with the owner) for construction. The architect's role during construction is limited to administration of the construction contract between owner and builder. Having developed a set of contract documents that establish a scope of construction work, the architect releases them to competing contractors who propose a price for completing the work. In most cases, the job is awarded to the lowest responsible bidder.

The bulk of this chapter details how the bidding process works in the context of traditional design-bid-build. Special attention is given to procedural issues and limiting liability. The remaining portion of the chapter

## notes

*Take brief notes while reading the narrative and list key resources you used to complete the activities. Note discussion outcomes from meetings with your supervisor, mentor, or consultants. When finalizing the activity documentation (PDF), include your notes and the Emerging Professional's Companion activity description.*

# Bidding & Contract Negotiation

provides an overview of contractor selection in alternative approaches to project delivery, including design-negotiation-build, design-build, and construction management. In contemporary design and construction, such approaches are often worth considering for economic, schedule, technical complexity, and project coordination reasons and thus are increasingly common. However, such project delivery methods have very different implications for project coordination and liability, and for the architect's roles and responsibilities, than does the design-bid-build approach.

The following discussion of competitively bid contracts outlines many of the issues generally associated with contractor selection and project delivery, no matter what delivery method is employed. Following it is a detailed description of bidding procedures, followed by a review of practical and legal pitfalls in bidding and contract negotiation.

## Preparation

Competitive bidding involves sending complete sets of contract documents to two or more contractors who bid against each other. Usually, the lowest bidder is awarded the contract. The initial tasks in a competitive bidding process include: determining whether the pool of bidders should be open or selective, qualifying contractors, and preparing and issuing the bid package.

### Choosing Open or Selective Bidding

The architect and the owner decide whether they will get better results for a project by choosing from a large or a small pool of bidders. Their decision determines whether the bidding process is open or selective.

When attracting a large number of bidders is considered desirable, as is often the case in public sector work, open bidding is used. An "advertisement to bid" is published in trade or government publications or professional journals, inviting any interested contractors to participate. When a limited number of bidders are preferred, a selective bidding process is implemented. An "invitation to bid" is sent to a selected group of contractors based on reputation, recommendation, prior work, or previous relationship with the owner or the architect.

### Qualifying Bidders

Prospective bidders are identified based on their ability to successfully undertake a project. In some cases, the contractor's reputation or relationship with the owner is sufficient, but sometimes it is necessary to establish the qualifications of contractors before bidding documents are issued. This is particularly important in the open bidding process, so unsuitable bidders are eliminated and the administration effort involved in competing a high number of bidders is reduced. AIA Document A305™, Contractor's Qualification Statement, may be used in the pre-qualification stage of the open bidding process to help the architect and the owner assess a contractor's suitability for the project. When completed, the document provides full details of the contractor's business record, including business history, organization and scope of operations, past record of construction work (type, range of experience, etc.), trade and bank references, bonding company, and details of assets and liabilities.

## resources

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The American Institute of Architects. Demkin, Joseph A., ed. *The Architect's Handbook of Professional Practice*. 13th ed. New York: John Wiley & Sons, 2001.

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The American Institute of Architects. Demkin, Joseph A., ed. *The Architect's Handbook of Professional Practice*. 14th ed. Hoboken: John Wiley & Sons, 2008.

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The Construction Specifications Institute. *The Project Resource Manual: CSI Manual of Practice*. New York: McGraw-Hill, 2005.

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AIA Contract Documents are considered the industry standard. Learn more at [www.aia.org/contractdocs](http://www.aia.org/contractdocs). In addition, samples of AIA Contract Documents are available for interns. [View the list of sample contract documents and resources for interns.](#)

## Preparing the Bid Package

To facilitate contractor selection, the owner may fill out AIA Document G612™, Owner's Instructions to the Architect Regarding the Construction Contract. The information in this document is intended to provide information to the architect that will clarify the owner's requirements and preferences. Once bidders have been identified, a package of information concerning the proposed project is issued. The package includes the following:

- Invitation or advertisement to bid
- Drawings and specifications
- Bid form
- Notice to Bidders
- Instructions to Bidders
- Proposed contract documents
- Bid security details (if required)

## Invitation or Advertisement to Bid

The original invitation or advertisement provides a concise summary of the project. The law usually requires public work to be advertised in generally available publications. Private clients may choose to advertise in trade publications or other venues, depending on the nature of the project.

## Drawings and Specifications

These documents should be as complete and unambiguous as possible to make it possible for the contractor to bid accurately. They are sent free of charge to bidders. To ensure that unsuccessful bidders return the bidding documents, a deposit is usually required; this is returned upon receipt of outstanding documents. The number of sets for each bidder varies; two may be appropriate for smaller work, while larger projects may require three or more. Projects that are more complex or under time constraints may require extra sets. The architect can require additional payment for the extra work necessary to produce multiple sets. Similarly, if any of the bidders ask for extra copies, these may be provided at the bidder's expense.

## Pre-Bid Conference

Depending on the nature of the project and client preferences, a conference for potential bidders may be useful. Walter Rosenfeld, AIA, CSI, offers the following advice in the 13th edition of *The Architect's Handbook of Professional Practice*:

A pre-bid conference, held two or three weeks before bids are due, may be valuable for several reasons. It focuses potential bidders on the project, allows the architect to reiterate key points in the documents, and (if held at the site) gives bidders an opportunity to visit the site. An agenda might include the following items:

- Project background
- Confirmation of bid date and procedures
- Further explanation of alternates
- Identification of special issues or working conditions
- Any update on the post-bid schedule
- Questions and observations about the project

For the owner and architect, such a meeting provides an indication of contractor interest in the project. It may disclose questions or issues that require clarification or additional information, which results in an addendum to the bid documents. (Many architects report that they do not answer any such questions at the pre-bid conference, both to provide time for a full answer and to be sure that all bidders receive the same answer.) On occasion the pre-bid conference may uncover a significant gap in the documents or bidding procedure—a gap that is much easier to address during bidding than after all the proposals have been received.

# Bidding & Contract Negotiation

Although contract documents should be complete and unambiguous, it is not always possible to determine the full scope of a project without designating certain alternatives to be decided by the owner at a later time. This need for flexibility can be accommodated in two ways:

- *Alternates.* An alternate bid may be required or accepted for a specified section of the work, and this should be included in the calculation of the base bid. This procedure can help keep costs within budget but should be used sparingly. It should not be employed to give one bidder preference over the others.
- *Unit prices.* Unit prices supply a price per unit for materials and/or services. They offer the architect and owner a comparable means of measurement to use in comparing bids. Unit prices also provide an idea of price calculation for unknown quantities or variable factors. Use of this approach should be limited if the overall budget needs to be controlled.

## Bid Form

This form is sent to all bidders and contains relevant information concerning the project. Each bidder returns the document complete with the price of the work, or base bid, and any other figures that may be appropriate (e.g., alternate bids, substitutions for specified materials or services, etc.).

## Notice to Bidders

This notice, which may be included in the bidding documents, informs prospective bidders of their opportunity to bid and of the conditions and requirements involved.

## Instructions to Bidders

AIA Document A701™, Instructions to Bidders, provides relevant information concerning the detailed requirements of the bidding process. Included are the following items:

- Definitions
- Bidding documents
- Consideration of bids
- Owner-contractor agreement
- Supplementary instructions
- Bidder's representations
- Bidding procedures
- Post-bid information
- Performance/labor and material payment bonds (see bid security below)

## Proposed contract documents

All documents intended for use in the proposed project should be sent to each bidder for examination, including the general conditions (e.g., AIA Document A201™, General Conditions of the Contract for Construction) and any other applicable addendums or supplementary conditions. A new edition of the contract was published in 2007 with changes to contractor and client responsibilities, which should be checked carefully.

## resources

### Bidder's Representations

According to AIA Document A701™, Instructions to Bidders, the act of making a bid represents the following:

- The bidder has read and understands the bidding documents.
- The bid complies with the bidding documents.
- The bidder has visited the site and observed the conditions under which the work will be performed.
- The bid is based, without exception, on the materials, equipment, and systems called for in the bidding documents.

In addition to familiarizing themselves with the site and requirements of the project, bidders are to report to the architect any errors, inconsistencies, or ambiguities they discover in the construction documents.

[View the list of sample contract documents and resources for interns.](#)



## **Bid security**

In order to ensure each bidder's commitment to their base bid and willingness to fulfill their obligation to sign the contract if they are selected, the owner may require some form of security, which should be submitted along with the returned bid form. The security might take the form of cash, a certified check, or a bid bond (AIA Document A310™, Bid Bond).

The bid security could be expressed either in a lump sum or as a percentage of the base bid. Bidders usually prefer the former, as it does not reveal their bid before opening. This amount is usually not less than ten percent of the bid amount. A successful bidder that refuses to undertake the work for the bid specified may forfeit all or part of the security. The penalty amount is usually determined as the difference between the selected bid and the next lowest bidder, although the penalty cannot exceed the amount of the security.

## **During Bidding**

AIA Document A701™, Instructions to Bidders, sets forth some commonly used bidding procedures, including the provision of information for use by contractors in preparing and submitting their bids. The summary below reflects these bidding procedures, although of course other procedures may be used to reflect a project's unique requirements. After the bidding documents have been mailed, it may be necessary for the architect to modify the bidding documents before bids are due. Once bids have been submitted, a bid opening is held and the final selection of the contractor is made.

## **Modification of Bidding Documents**

The owner if necessary may request certain adjustments to the documents before the closing date for bid submission. These are usually in the form of interpretations or substitutions.

## **Interpretations**

If any bidders discover errors or ambiguities in the documentation, they must inform the architect in writing at least seven days prior to the submission date. The architect issues any changes or addenda that result from the inquiry to all bidders.

## **Substitutions**

Should any of the bidders wish to substitute materials or services otherwise specified in the bidding documents, the architect must receive a request for approval in writing at least 10 days before the submission date. If the architect determines the substitution is acceptable, all parties are notified by addendum, although no addendum can be made within four days of the final receipt date except a notice canceling or postponing the request for bids.

## **Submission of Bids**

Bids must be received in writing, contained in sealed, opaque envelopes prior to the time and date specified in the advertisement/invitation to bid. Oral bids are not acceptable, and any bids received after the specified time should be returned unopened.

## notes

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## Bid Opening

If the bids are opened in public they are often read aloud. When bids are opened in private, the bidding information may be sent to all bidders at the owner's discretion. The owner need not accept any of the bids if they appear too high and may reject any bid not in conformance with the stated requirements. However, the bidding documents do provide that if a contractor is chosen, it will be on the basis of the lowest responsible bid. A decision is usually made within 10 days of the bid opening.

In publicly bid work, the owner is often constrained by law to accept the lowest responsible bidder and thus may be held liable if the selection does not conform to that requirement (i.e., the lowest monetary bid, coupled with the owner's satisfaction that the contractor can successfully undertake the work). In privately bid work, the owner's obligation to accept one of the bids is not as clear, particularly when an owner has specifically reserved the right, in its sole discretion, to accept or reject bids. However, even when there is no legal obligation to accept a certain bid, owners may feel compelled from a business standpoint to select the lowest bidder to prevent suspicion of favoritism and avoid ill feeling among contractors with whom they may want to work in the future.

## Contractor Selection

Prior to the bid opening, any bidders may withdraw or modify their bids. However, once the bids have been opened, bidders cannot make changes or withdraw from the process for a period stipulated in the bidding documents (e.g., 30 days). Once selected, the successful bidder must undertake the work for the agreed price or risk forfeiting the bid bond (if any). Exceptions to this are sometimes made if a bidder can prove substantial error in the bid calculation, in which case withdrawal might be appropriate, with award of the contract to the next lowest bidder. Alternatively, the contract may be re-bid. Defaulting bidders should be disqualified from any further bidding on the same project, and no bid correction should be permitted, except for minor clerical errors and alterations.

## After Bidding

When a contractor has been selected (usually within 10 days of bid opening), all bidding parties should be informed of the decision. Unsuccessful bidders are often given a list of the bid figures, and the bid deposits are returned once the contract documents have been returned. The successful bidder should be informed of the decision in a way that does not form a legally binding agreement before the contract documents are signed. Usually, the bids of the next two or three lowest bidders are retained for a specified period as a contingency measure.

At this stage, each party to the proposed building contract may provide further information and/or assurances to the other parties. For example, the owner may, upon request, demonstrate to the contractor that sufficient financial arrangements have been made to undertake the project. The contractor, typically within seven days of the contract award, should furnish names of proposed suppliers of materials and equipment, details of the amount of work to be undertaken by the contractor's forces, and a list of

## resources

### Owner-Architect and Owner-Contractor Agreements

For more information about owner-architect and owner-contractor agreements, consult the following resources:

The American Institute of Architects. Demkin, Joseph A., ed. *The Architect's Handbook of Professional Practice*. 14th ed. Hoboken: John Wiley & Sons, 2008.

- Chapter 16 Types of Agreements

The American Institute of Architects. Demkin, Joseph A., ed. *The Architect's Handbook of Professional Practice*. 13th ed. New York: John Wiley & Sons, 2001.

- Chapter 11 Contracts and Agreements

The American Institute of Architects, *The Architecture Student's Handbook of Professional Practice*. 14th ed. Hoboken: John Wiley & Sons, 2009.

- Chapter 11 Types of Agreements



intended subcontractors for the architect's approval. The contractor may also be asked for a qualification statement (if appropriate and not required prior to selection), evidence of the responsibility and reliability of the work force, and bonds in accordance with the owner's requirements as expressed in the instructions to bidders.

When these and any other preliminary matters have been dealt with and the contracts prepared, the owner and contractor are ready to enter into the contractual agreement.

## After the Agreement

As soon as practical after the owner-contractor agreement has been signed, the contractor should submit a list of proposed subcontractors and suppliers to the architect. Under the single contract system, it is not unusual for prime contractors to sublet parts of the work to other contractors, either because of the size of a project or to take advantage of special skills and expertise the subcontractors have to offer. The contractor may select suitable subcontractors, and the owner typically cannot require a contractor to work with anyone about whom the contractor raises reasonable objections.

The architect or the owner may lodge reasonable objections to any of the names on the contractor's list of subcontractors, but such objections should be made promptly so the contractor may submit a substitute. If the substitution is acceptable, the contract sum can be adjusted by change order to accommodate alterations in cost caused by the substitution. The contractor should not change any subcontractors for a project without the knowledge and approval of the architect and the owner.

If AIA owner-contractor agreements are being used and subcontracting is expected, it may be advisable to use a standard form of subcontractor agreement. AIA Document A401™, Contractor-Subcontractor Agreement Form, can be used in conjunction with other AIA documents.

Subcontractors may, in turn, engage other contractors, termed sub-subcontractors to work on a project. The relationship between these parties is similar to the relationship between the contractor and subcontractor, although the prime contractor still has overall responsibility to the owner for the project.

## Practical and Legal Safeguards

What practical and legal issues are associated with bidding? On the whole, comparatively few legal cases provide guidance about an architect's liability originating from errors in bidding. Despite this relative dearth of legal authority, architects can take at least some steps to protect themselves from claims by clients, contractors, or subcontractors and to protect the owner's interests during the construction phase.

### Quality Documentation

Court cases involving contractors' claims based on misinterpretation or inadequate documentation highlight some of the problems an architect may cause or otherwise encounter. Hazy documentation, for example, may induce bidders to build substantial contingencies into their base bids. This could leave an architect

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open to claims for inadequately estimating project construction costs. Some courts have ruled against architects when bids exceeded estimates by as little as fifteen percent, or even less. This is worrisome considering that professional liability insurance often does not cover errors in cost estimating.

When there is limited preparation time, or when owner requirements are uncertain, clarity in documentation may be difficult to achieve. However, clear and carefully produced construction documentation allows for greater precision in bidding and thus a more realistic construction cost.

Other aspects of bidding that can affect cost include requests for alternate design bids and for unit pricing. Architects should exercise special care whenever these optional bidding devices are under consideration.

## Clear Rules

Courts have ruled on a number of occasions that owners do not act in good faith when they make what may appear to be arbitrary selection decisions. In one example, an owner decided to award a contract to the second lowest bidder because it was a local corporation. A court ruled this decision invalid because locale was not initially listed as a criterion.

To avoid this type of situation, your notice to bidders and instructions to bidders should be stated very clearly. Be sure to mention every factor you and the owner will use to select the winning bid. In addition, exactly the same data should be sent to all bidders, including any clarification requested by one of the bidders prior to bid opening.

## Strict Adherence to Procedures

Once the bid package has been released with its clear requirements, strict adherence to selection procedures will also often help the owner and architect avoid the appearance of unfairness or competitive advantage. Any action that smacks of collusion between the owner or the architect and one of the bidders invites suspicion and perhaps a lawsuit, especially in publicly bid work.

The procedures for bidding laid out in AIA Document A701™ offer a series of orderly steps and safeguards that protect the owner and, by implication, the architect from unqualified contractors. At the same time, they provide bidders with an even playing field. Public sector procurement procedures are often similarly designed, and are usually quite specific to help ensure fair and open competition.

To demonstrate fairness, valid bids can be opened in public and late bids returned unopened. The question of what constitutes a late bid has been the focus of a number of court cases brought by disgruntled bidders who felt a late bid gave a competitor an unfair edge. In one case involving a federal project, acceptance of a bid 30 seconds after the time of bid opening was held to be invalid. While some flexibility may be acceptable in special circumstances—mail delivery problems, perhaps—the architect should advise the owner of problems that may result from accepting late bids.

## resources

As you research and look for more information on topics presented in the *Emerging Professional's Companion*, remember that a quick internet search of keywords can be incredibly useful to completing your Activities.

## Cautious Rejection of Bidders

Some suits have been brought against design professionals who counseled against hiring particular contractors. In one case, an engineer's opinion rendered in good faith helped fend off a suit from a bidder the engineer felt lacked sufficient experience to do the work. However, courts have ruled against an owner who decided the lowest bidder was insufficiently responsible based solely on rumors of poor performance or who did not solicit sufficient information on a hitherto unknown contractor. These decisions were based on the concept that the owner exercised insubstantial reasoning in rejecting the contractor. Owners are expected to consider a contractor's recent performance to verify if earlier problems have been addressed.

An architect who chooses to advise an owner to reject a contractor with the lowest bid should do this with great care, especially in publicly bid work. Architects' advice on hiring will be most defensible if it is based only on objective, factual considerations and is free of any conflict of interest. When an architect recommends rejection, it is best to record in writing the data and reasoning that led to this decision. Avoid sweeping personal statements and slander. Also make it a point not to record statements that, however innocently intended, may come back to haunt you.

A similar approach should be adopted when an architect demands substitution of a subcontractor. It is estimated that very few architects actually take advantage of their contractual ability to object to subcontractors or suppliers proposed by a contractor. If this power is invoked, however, the rationale for substitution should be clearly and objectively articulated to limit the possibility of a claim from a disgruntled rejected subcontractor.

## Contractor Selection and Alternate Delivery Methods

Design-bid-build is just one of many project delivery approaches used today. Following are brief descriptions of the major alternatives:

### Design-Negotiation-Build

An owner may choose to select a contractor on the basis of reputation, specialized expertise, or a past working relationship. In this arrangement, the owner negotiates the terms of the agreement and payment for the work, forgoing the advantage of having the project competitively bid.

Owners choose this delivery method when project requirements justify it, for example, when quality rather than economy is a major determinant. In other circumstances, it may be advantageous to skip the bidding process to get construction underway more quickly. Negotiation can also make it possible to bring a contractor on board before contract documents are complete, which may provide benefits in terms of coordination and communication among the owner, architect, and builder. Usually, a cost plus fee contract, in which the contractor is reimbursed for the cost of doing the work, with a separate fee for overhead and profit, is used for this project delivery method.

### Design-Build

The design-build approach, where the owner contracts with a design-builder to provide both the design

## notes

and construction of the project, is becoming more popular. Architects and contractors may join forces, perhaps through a strategic alliance, to compete for a specific project, or they may establish a design-build firm. A design-build team may be led by the architect or the contractor, although the latter arrangement is more common. The design-build entity may also be a design-build company with architects and contractors under one roof.

Depending on how the agreement is written, professional liability exposure for an architect in design-build delivery may be greater than, the same as, or less than in traditional design-bid-build delivery. The onus is typically on the owner to select and manage the design-build team. In design-build, the design-builder cannot make a claim to the owner for defects in the plans and specifications, since the design-builder is responsible for creating them with its own architect. Thus, the architect is not liable to the owner for errors and omissions in its design, but may be liable to the design-builder.

In design-build, the architect and builder work together from the beginning of the project, allowing them to work out constructability issues early and more easily fast-track the project. The advantages of design-build: time-savings, efficiency, and reduced risk of claims to the owner, are not guaranteed; but, if the design-builder and the architect have a good working relationship, it will be more likely to attain these advantages.

## Construction Management

As construction projects have become larger and more intricate, and the design and construction industry has fragmented into ever-greater specialization, new roles have emerged simply to cope with all that complexity. A construction management (CM) approach to project delivery is designed to address these issues. In it, the architect can serve the owner in one of three distinct roles:

- **CM-adviser:** Under a separate and distinct contract with the owner (but not with the architect or contractor), a CM-adviser provides expertise to owners on issues of project scope, constructability, and procurement and management of design and construction services, including contractor selection. The owner gains impartial advice, but must now manage three distinct contracts instead of one or two.

The addition of a CM-adviser works well with the separate design and construction increments of the design-bid-build and design-negotiation-build approaches. On the other hand, it creates potential redundancies and conflicts with the role of the architect in a variety of matters, including contractor selection. It is critical, therefore, to carefully define the CM-adviser's roles and responsibilities in the contract formulation stage. The CM-adviser may incur liability for input affecting building design and construction.

- **CM-agent:** A CM-agent provides a single point of contact for the owner with an entity that is empowered to act on the owner's behalf, including having the fiscal authority to contract directly with an architect and builder. An owner who is unusually distant from a

## resources

Abramowitz, Ava J. *Architect's Essentials of Contract Negotiation*. New York: John Wiley & Sons, 2002.

## Five Factors to Reduce Risk in Project Delivery

Useful guidance for establishing a sound contractual basis for effective working relationships and overall risk management can be found in Ava Abramowitz's book *Architect's Essentials of Contract Negotiation*. Her advice covers working with savvy clients and other experienced parties to the contract and "front-end alignment" of goals and processes among project participants. Her analysis of a two-year study of risk management factors for A/E firms, carried out by Victor O. Schinnerer & Company, highlights key risk factors specifically associated with project delivery and contractor selection. Risk management in the transition from design to construction requires thinking about more than which mode of contractor selection and project delivery to choose. According to Abramowitz, five "claims preventers" are more important than the project delivery method chosen:

### 1. Experience with the Project Delivery Approach

Experienced people succeed, more often than not, because they can anticipate and address problems faster and better than those who are new to a situation. This is one reason everyone should think twice before proposing delivery systems (or contracts) with which few people are familiar.

### 2. Architect Involvement in Selection of Contractor or CM

Since construction contract documents are never complete, construction will go more smoothly if the contractor, or construction manager (CM) if there is to be one, can work effectively with the architect to bring the construction documents to life. This is why so many claims-free firms volunteer a list of good contractors or CMs from which the owner may invite bids. Some of these firms charge a lower fee for construction contract administration services when the contractor or CM is selected from their "recommended" list. Alternatively, they may add a surcharge for construction contract administration when the owner selects a contractor not on their list.

### 3. Qualifications-Based Contractor Selection

The data suggest that contractors selected on the basis of qualifications, rather than bid price alone, perform better. The federal government and some states are beginning to recognize the value of qualifications in the contractor selection process. The U.S. Army Corps of Engineers, for example, increasingly uses a "best value" approach to contractor selection. The Corps decides which contractor skills and qualifications are necessary, assigns a weight to each of these, and make its selection accordingly. Cost is invariably a measure in contractor selection, but it no longer needs to be the controlling one.

### 4. Early or No CM Involvement

Data show that the presence of a CM increased the number of claims for the firms studied and, albeit to a lesser extent, increased the losses from those claims. This is not an anti-CM statement. Often, having a CM can make all the difference; however, in many projects, CMs are brought in too late to have their ideas and expertise incorporated into the A/E's thinking. When that happens, all the CM can do is "undo" the design that was bid on, under the guise of value analysis. In fact, according to Schinnerer data, the later in the process value analysis is introduced, the more likely it will cause a claim. Even when CMs are brought into the process early, they are other parties who add their own ideas and objectives to the project, adding one more set of risks to be managed.

### 5. Adequate Schedule

Undue speed can cause problems. There is nothing inherently wrong with fast-tracking a project, but fast-tracking without the careful detailing of an agreed-upon program and scope of work can be dangerous. Designs implemented at one stage may prove insufficient later. This is especially true if the parties' understanding of the project objectives or design parameters change over time.

project, such as a corporation building in a foreign country, might use this approach. The approach is used infrequently in the public sector because of the granting of fiscal authority.

In terms of contractor selection, the role and responsibilities of the CM-agent and those of the project architect need to be clearly defined to avoid potential conflict. Insofar as a CM-agent acts on behalf of the owner's interests, he or she may incur liability in addition to that for design and construction decisions.

- **CM-constructor:** The construction-manager-as-constructor delivery method enables the construction manager to assume all the responsibilities and liabilities of a general contractor. The approach is similar to traditional project delivery in that it maintains a contractual relationship between the owner and architect. It also offers some of the benefits of the CM-adviser approach by bringing advice on cost containment and constructability early on in the process. The architect works separately with the owner to develop documentation that delineates the scope, functional requirements, and aesthetics of a project. These scope-of-work documents can then be used either to competitively bid or to negotiate the selection of the CM-constructor, and the CM-constructor architect assists the owner in this process. The CM-constructor's and the architect's responsibilities for design and construction decisions must be carefully delineated in the contract documents.

## Integrated Project Delivery

In recent years, Integrated Project Delivery (IPD), which is made possible by sophisticated Building Information Management (BIM) has become the focus of much discussion. With IPD, the architect, consultants, contractor, owner, fabricator, and subcontractors joint own a 3-D computer model of the project. Everyone shares in the liability, and collaboration among all parties begins from the inception of the project. Each party shares its expertise as well as the risks and rewards. The IPD approach lends itself to design-negotiate-build and design-build delivery, but as defined above, is less practicable for traditional design-bid-build projects.

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*Written by Robert Greenstreet, Int. Assoc. AIA, RIBA*

*Robert Greenstreet is an architect currently serving as dean of the School of Architecture and Urban Planning at the University of Wisconsin-Milwaukee.*

## resources

Learn more about integrated project delivery (IPD) by downloading [\*Integrated Project Delivery: A Guide\*](#), produced by the American Institute of Architects.



## notes

*Take brief notes while reading the narrative and list key resources you used to complete the activities. Note discussion outcomes from meetings with your supervisor, mentor, or consultants. When finalizing the activity documentation (PDF), include your notes and the Emerging Professional's Companion activity description.*

# Bidding & Contract Negotiation

## Learning from AIA Bidding Documents

*Supplemental Experience for eight (8) Core IDP Hours*

AIA Contract Documents provide a detailed, generally accepted procedure for contractor selection with which all entrants should become familiar.

Download sample copies of the following AIA Contract Documents associated with the bidding process and review them for consistency with the concepts presented in the narrative.

- A305™, Contractor's Qualification Statement
- A310™, Bid Bond
- G612™, Owner's Instructions to the Architect Regarding the Construction Contract
- A701™, Instructions to Bidders

## Activity - Core

Take a look at file copies of as many of these documents as you can for a project that your firm or a mentor's firm has completed recently. Write a summary answering the following questions:

- Which documents were utilized?
- Were there any changes that your firm has made in following standard bidding and contract negotiation procedures as detailed in the documents and described in the narrative?
- What was the purpose behind those changes, and did they positively or negatively affect the outcome of the bidding process in terms of minimizing your firm's liability or the overall success of the project?

Write a report summarizing your conclusions. Be sure to note any potential pitfalls, problems or challenges you feel a project manager should be aware of, based on your analysis of both the documents and the file copies.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

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## Completion of Bid Forms for a Project

*Supplemental Experience for eight (8) Core IDP Hours*

With the help of the project manager in your firm or an IDP mentor, find a set of drawings that were issued for bid, completed bid forms, and any addenda that were issued in your firm's archives. Do not review the addenda or forms just yet.

### Activity - Core

With the bid drawings you found as the basis, complete your own set of bid forms for the project. Review the drawings carefully and decide what, if anything you should include in an addendum to be issued to the bidders.

Compare what you have to what was done for the original project. Make any necessary adjustments to what you have prepared.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

# Bidding & Contract Negotiation

## Attendance at a Pre-Bid Meeting

*Supplemental Experience for eight (8) Core IDP Hours*

Prior to contractor selection, potential bidders may attend a pre-bid conference to ask specific questions about the project. Their perspectives are useful in gauging their concern about the procedures that will involve them in considering their bids.

### Activity - Core

Arrange to attend a pre-bid meeting in your area and take notes on the proceedings.

- What kinds of questions come up?
- How do the participants behave?
- Do they appear to use their questions to posture and jockey for advantage, or do they simply want to get their questions clarified?
- Does the process appear to follow to the steps, suggestions, and requirements described in the narrative of this chapter?
- If the process strays from what is described in this chapter, does it put the project and the participants at risk?

Write a memo to the individual conducting the pre-bid meeting summarizing your observations and outlining five questions asked by the contractors with your proposed responses. Include recommendations on how to make the next meeting for a similar project better.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

## Attendance at a Public Bid Opening

*Supplemental Experience for eight (8) Core IDP Hours*

After all of the proceedings have been put into place and the bidding contractors have proposed their bids, the bid opening brings the process to an abrupt, and hopefully productive, conclusion. Obviously, stakes can be high, so the procedures must be followed carefully.

### Activity - Core

Attend a public bid opening in your area and take notes on the proceedings. Be sure to arrive 30 to 60 minutes early so you see the process from start to finish.

- How many people arrived early? How early did they arrive?
- Were any questions asked?
- How did the bidders behave?
- Was the opening what you expected? How did it differ and why?

After the meeting concludes be sure to observe any side conversations amongst both the high and low bidders. Prepare a report that summarizes your observations. Include overall comments from the bidders and any obvious reasons for their comments. Also include aspects of the bid opening that were handled well and which were not. Make any recommendations for improvement.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

# Bidding & Contract Negotiation

## Project Delivery Approaches

*Supplemental Experience for eight (8) Elective IDP Hours*

Every project will exhibit its own characteristics and challenges and it is important to become familiar with as many examples as you can.

For this activity, gather information about completed building projects or projects in progress from several supervisors and project managers at your firm or your mentor's firm. Choose at least three projects (preferably using three different project delivery methods, if possible).

## Activity - Elective

Record information on how contractors were selected for each project using the following suggestions as a basis for your research:

- Identify the strategies used to select contractors for each project.
- Characteristics of the projects associated with each project delivery method, including project type, size, complexity, and client experience.
- Find out what you can about the bidding and negotiation processes. For example, find out how many bidders there were, what they bid, and which contractor was selected.
- How did the bids compare to the original estimates?
- Try to determine how the selection process set the stage for the successful completion of the project or for subsequent difficulties.
- Would the project outcome have been dramatically different if another mode of delivery had been used?
- Did any ethical dilemmas arise? Any issues of legal liability?
- What did your firm do well in the process? Did the firm do anything questionable or worth rethinking?

Write a report summarizing your review of the three case studies. Create a chart or matrix for quick reference for later use.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

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## Design Without Compromise & the Bid Package

*Supplemental Experience for eight (8) Elective IDP Hours*

In this scenario, you are working with a private foundation to design offices for its national headquarters. The board of directors agrees in principle with your vision of an environmentally sustainable building, although board members voice some concern about additional up-front costs related to certain features. You believe it is better to send the project out for bid with the sustainability design concepts fully intact and to deal with the inevitable compromises and value engineering later. The bids arrive and they are, to your client's dismay, much higher than anticipated. In a letter, the board expresses profound disappointment in your leadership and professional advice. The letter contains the veiled threat of a lawsuit. You learned in school that a project needs a strong design concept to withstand the inevitable erosion that is part of getting a building built. In this case, though, your strategy for getting the project past the bidding stage without compromise seems to have backfired.

### Activity - Elective

In a letter to your client, communicate what you can do to salvage the project and your relationship with the client. Does AIA Document B101™, Standard Form of Agreement Between Owner and Architect, offer any guidance? [Download a sample copy](#) of AIA Document B101™.

Consider questions such as these:

- Should you revise the drawings at your own expense?
- How might you have structured the contractor selection and/or bid package to deal with what you now realize is a very unpredictable bidding environment?

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

# Bidding & Contract Negotiation

## Rebar Construction Revokes its Bid

*Supplemental Experience for eight (8) Elective IDP Hours*

In this scenario, three weeks after the public bid opening for a public parking garage project, Rebar Construction informs you and your client that its bid contains an error significant enough to raise the price above that of the next lowest bidder. Based on your previous experience with the contractor, you suspect that Rebar has obtained another, more lucrative contract, and that it is concocting the error to get out of the parking garage job. Rebar insists that it made an honest mistake and cannot be held to the bid.

## Activity - Elective

Download a sample copy of AIA Document A701™, Instructions to Bidders. Prepare a memorandum to the client addressing the following questions, and explain the reasoning behind your answers:

- Should Rebar be held to its original bid?
- Does Rebar need to prove that they made an honest error?
- Should the contractor be allowed to adjust the bid?
- Should Rebar be liable for the cost of the difference between its original bid and the next lowest?
- How would you frame the options for the client, and what are the potential consequences of each course of action?

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

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## Bids for an Elementary School

*Supplemental Experience for eight (8) Elective IDP Hours*

In this scenario, your practice was retained to design a new elementary school for the local school board. A budget of \$7,000,000 was set at the outset of the project, and you followed through with a comprehensive cost control program during design. You are confident a bid or bids will be received below budget. Two days ago, you attended the bid opening at the school board's offices. You analyze the bid results in [Exhibit 3A-1](#) and prepare a report for your client.

In the meantime, however, you have received a letter from the chairman of the school board (see [Exhibit 3A-2](#)).

## Activity - Elective

All you have to work with is the bid tabulation summary as the detailed analysis has not yet arrived from the client. You are under pressure to respond immediately. Write a response to this letter containing the following:

- Your explanation of the gap between the low bidder and the remaining bidders
- A recommendation of whether to accept or reject the low bid
- If the low bidder is accepted, special precautions the owner should take
- If that low bidder is not accepted, address how you would deal with a likely protest from the low bidder
- Additional steps you would recommend and the time necessary to make a final recommendation to the owner.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

# Bidding & Contract Negotiation

## Alternates & the Over-Budget Project

*Supplemental Experience for eight (8) Elective IDP Hours*

In this scenario, your client, Green Valley Center for the Performing Arts, has been planning a new facility for nearly ten years. The budget has always been tight, and the scope of the building program ambitious. It includes a theater, recital hall, dance studios, classrooms, and numerous ancillary facilities that will combine to make this the premier performing arts institution in the region. Unfortunately, about 24 months ago fundraising began to lag because of a slow regional economy, and you had to place the project on the shelf. But now Green Valley is back—they have achieved their fundraising goals and are ready to put the project out to bid. You are impressed by their perseverance, but you have to tell them that the local construction market is now bustling, and the bidding climate does not look favorable. You expect the bids to come in high, perhaps as much as 20 percent higher than you would have anticipated two years ago.

### Activity - Elective

Determine how the bidding package could be structured to help the clients realize their dream. Explain in a memorandum to the client how the bid package might be restructured using alternates to successfully select a contractor. What are the major strategies you would suggest to your client? What other cost savings could you recommend to them?

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

3A

## Bidding Procedures – Public vs. Private

*Supplemental Experience for eight (8) Elective IDP Hours*

During the bidding process there are procedures that must be adhered to strictly. These procedures are often very clear and somewhat scripted for public works.

### Activity - Elective

Research the public bidding process within your jurisdiction. Interview a project manager within your firm or your mentor's firm about bidding procedures for private sector work. Write a report comparing and contrasting the two types of procedures. Be sure to note what procedures are consistent across both areas of bidding. Include which process you believe is better and why.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

# Bidding & Contract Negotiation

## Pulling the Plug on the Electrical Sub

*Supplemental Experience for eight (8) Elective IDP Hours*

In this scenario, the contractor for a publicly bid state correctional facility project has submitted a list of subcontractors for the job. You feel compelled to object to one of them, Flicker Electric. In your experience, Flicker bids low and tries to make up the difference in change orders. The company often complains about lack of coordination among the architectural and engineering drawings and specifications. They have delayed more than one job because of their unreliability, and they have a penchant for damaging the work of other subcontractors and then denying responsibility. The owner, Will Flicker, is unpleasant, and you would like to avoid working with him. The problem is that eliminating Flicker will almost certainly raise the base bid above that of the next bidder.

## Activity - Elective

Write a memorandum to the contractor that rejects Flicker Electric, while protecting your firm from liability and preserving the integrity of the public bidding process. Be mindful of specific pitfalls you must avoid in discussing your objection, specifically, inaccuracy, subjectivity, and hyperbole.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

3A



## Bidding Error on the Up and Up?

*Supplemental Experience for eight (8) Elective IDP Hours*

*The following case was adapted from Barry Wasserman, et al., Ethics and the Practice of Architecture (John Wiley & Sons, 2000).*

In this scenario, you are hired by a small city to provide design and construction administration services for a new elementary school building. Knowing that the \$1.2 million budget for the project is tight, you work with the client to provide maximum flexibility to adjust the scope of the project by including two additive alternates and five deductive alternates. Five contractors bid on the project, and the bids are announced in public at your office. Representatives from all five bidders are present. The lowest bidder is Sound Construction. It is awarded the contract on the basis of its base bid; even with the additive alternates, Sound Construction is the lowest bidder.

The next day, Sound Construction calls to inform you that its electrical subcontractor has made a serious error, omitting the cost of light fixtures. The total error is \$20,000, enough for Sound Construction to seek to add the amount to its original bid. Without the addition, Sound will have to withdraw its bid entirely. Even with the additional \$20,000, Sound Construction's bid is still be the lowest. Your firm has worked with Sound Construction before, and you believe the company is honest. You have never worked with the second lowest bidder.

## Activity - Elective

Prepare a recommendation letter to the client summarizing the situation and answering the following questions. Be sure to explain the reasoning behind your answers:

- Should Sound Construction be allowed to adjust its bid? Provide reasons.
- Should you tell Sound Construction that its bid cannot be changed or withdrawn?
- Should you declare the lowest bid invalid and force the owner to accept the second lowest bid which would obligate the owner to pay more for the project?
- What ethical considerations, if any, are due to the bidders?
- How does the fact that this is a publicly bid project complicate the decision?

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

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# Bidding & Contract Negotiation

## The Late Bid

*Supplemental Experience for eight (8) Elective IDP Hours*

In this scenario, at precisely 12:01pm, the municipality of River City, Iowa commenced with the opening of bids for the construction of a new library. All bids were due exactly one minute earlier at noon that day. At 12:10pm, one of the local contractors, Harold Hill of Hill Construction, burst into the hearing. Apologizing for his tardiness, Mr. Hill handed his sealed, opaque envelope to the city official who was opening the bids and reading them aloud. "There was a rehearsal of the marching band blocking Main Street, just as I was approaching City Hall," he explained. The city officials and Marian, the librarian, look to you for guidance. You sense an impending lawsuit from Hill if you recommend disqualifying his bid, or from the other contractors if you do not.

## Activity - Elective

What is your advice to River City, and what specific legal and contractual points support your position? Write your answer in the form of a pre-emptive letter to your attorney.

Share your work with your IDP supervisor or mentor and make suggested changes. Document the final version as a PDF.

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# Bidding & Contract Negotiation

## Exhibit 3A-1

Bid Record					
New Elementary School—Record of Bids Opened					
Date: 11 May 2007 Time: 3:00 p.m.		Prepared by: O. Jones		Package No.: 1	
Location: Fairfax County		Contract Title: R. Ramsey Elementary School			
Contractor	Bid Amount	Rank	Bid Bond		Remarks
			Amount	Type	
Yardstick Contractors	7,276,000	4	5%	X	See Bid Analysis form for record of addenda received, alternates, unit prices, list of subs.
The Griffin Construction Co.	7,200,000	3	5%	X	
Cook-Richards Co.	6,184,000	1	5%	X	
Prince Builders	7,158,000	2	5%	X	
Bucknall-Austin Co.	7,430,000	5	5%	X	
Jones & Jones Estimate	6,958,000				
School Board Budget	7,000,000				
<b>Bid opening committee</b>		O. Jones (Jones & Jones) R. Smith (School Board) B. Lang (School Board)			

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# Bidding & Contract Negotiation

## Exhibit 3A-2

FAIRFAX COUNTY SCHOOL BOARD

11 May 2007

Mr. O. Jones  
Jones & Jones Architects  
1021 Z Street  
Washington, DC 20020

Re: R. Ramsey Elementary School

Dear Mr. Jones:

I have been instructed by the School Board pursuant to the receipt of bids on this project on 11 May 2007, to request that you to carefully analyze the situation and recommend to the Board the action that we should now take.

While we are of course pleased that the low bidder is below your estimate and our budget for the project, we are very concerned that the second bidder is 14% higher and appears to be in a bracket with two other bidders. This might indicate the inability of the low bidder to complete the work for the price quoted.

We have no need to remind you of the seriousness of our budget situation in the event that the low bidder is not acceptable. On the other hand, we have no wish to contract with a party incapable of completing their side of the bargain. We look forward to your recommendations.

Yours sincerely,

Chairman of the Board

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## notes

*Take brief notes while reading the narrative and list key resources you used to complete the activities. Note discussion outcomes from meetings with your supervisor, mentor, or consultants. When finalizing the activity documentation (PDF), include your notes and the Emerging Professional's Companion activity description.*

# Bidding & Contract Negotiation

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