

## Chapter 1

# The Role of Specifications

### DOCUMENTS FOR CONSTRUCTION

When an Owner decides to build, renovate, or reconstruct a facility, the Owner usually engages others to prepare documents describing the Work to be performed and the contractual requirements under which construction and related administrative activities are accomplished. Contemporary construction practices in North America are varied, and construction contracts likewise express varied contractual relationships, procurement (bidding and negotiation) methods, and regional construction practices.

This complexity can be very confusing, so, for the purposes of this book, the discussion will be generally limited to the context of the traditional design-bid-build method for construction procurement, with comments occasionally describing alternative procurement methods, such as design-build, multiple prime contracts, and phased (“fast track”) construction. Also, the discussion will be in the context of three primary parties in the construction contract: the Owner, the Architect/Engineer, and the Contractor.

The Architect or Engineer, and his or her various consultants, prepare documents for construction of the facility. These develop over time, from conception of the design through gestation of design development, through the birth pangs of bidding/pricing and construction, until delivery of the completed facility at closeout of the construction Contract. Many types of documents are used during design and construction, but for actual construction three basic types of documents are used:

1. Bidding and Contract Requirements: Text documents
2. Drawings: Graphic documents
3. Specifications: Text documents

Combined, these three types of documents are called the Bidding Documents (before signing of the Agreement or “contract”) and the *Contract Documents* (after signing the Agreement or contract). The difference concerns when the documents are used. Prior to execution (signing) of the Agreement, the

combined documents are known as Bidding Documents under traditional design-bid-build projects. Under design-build and certain types of construction management-type projects, the documents prior to execution of the Agreement may be known as “Procurement Documents.” This is a fine distinction reflecting the process of negotiation for selection of product vendors and subcontractors, but in most cases, even under design-build and construction management-type projects, a competitive bidding process is used. So, “Bidding Documents” will be the term used here for the documents prior to execution of the Agreement. After execution of the agreement, the documents are known as the Contract Documents.

### BIDDING DOCUMENTS

“Bidding documents” is a term generally used to describe the documents furnished to bidders. For traditional design-bid-build projects, the Architect/Engineer and Owner prepare the set of Bidding Documents, consisting of bidding requirements, Drawings, and Specifications. These are issued to prospective general contractor bidders for competitive bidding and for the Owner to select the Contractor named in the Agreement and referenced in other Contract Documents.

However, there are projects where the Contractor is selected by a method other than competitive bidding, such as direct selection by the Owner based on qualifications of the Contractor. In such cases, competitive bidding still occurs but it is managed by the Contractor, who issues Bidding Documents and manages the bidding process.

The primary difference in documents between Bidding Documents and Contract Documents is the inclusion in the Bidding Documents of Bidding Requirements. These generally consist of the Advertisement or Invitation to Bid, the Instructions to Bidders, the Bid Form, and other documents to be submitted to the Owner for the Owner’s selection of the Contractor and modifications to the documents issued during bidding (addenda). The Bidding Requirements are removed after bidding and selection of the

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Contractor and are replaced by the Contract Requirements. The Contract Requirements typically consist of the executed (signed) Agreement with its related documents, such as insurance forms, bonds, and certifications. Note: the Bidding Documents typically include copies of the Agreement form and the Conditions of the Contract (General Conditions and Supplementary Conditions when industry-standard documents are used). The bidding process is described further in Chapter 8.

As noted above, two other types of documents are included in the Bidding Documents and the Contract Documents: the Drawings and the Specifications. This book will not describe principles and practices for production of the Drawings but will describe the types of information best presented on the Drawings (graphic presentation) and in the Specifications (text presentation), and the discussion will include coordination issues between the Drawings and the Specifications. Chapter 2 discusses the relationship between the Drawings and the Specifications in greater detail.

### CONTRACT DOCUMENTS

“Contract Documents” is the term used for documents identified in the Agreement (construction Contract). It appears simple, but, of course, these documents can become complicated as the project delivery process becomes more complex and the relationships between the parties involved in the project become more varied and obscure. Considering the typical design-bid-build project, the Contract Documents consist of the following:

- *Agreement*—A written agreement between the Owner and the Contractor summarizing the work to be performed, the Time in which the Work shall be completed, and the Contract Sum to be paid. Also identified in the Agreement are the Contract Drawings, the Contract Specifications, and other referenced documents such as bond forms, insurance certificates, other certifications, Contractor’s qualifications statement, documentation of the Contractor’s financial status, subcontractors and suppliers lists, special warranty documents, and just about any other type of written document that the Owner requires. Note: the Agreement is typically prepared by the Owner’s legal and insurance counsels or by the Construction Manager if one is involved in the project. The Architect/Engineer typically does not prepare the Agreement and its attachments. If the

Architect/Engineer is involved in producing the Agreement and its attachments, it should be under the direction of the Owner. Architects and engineers are not trained to produce legal instruments (documents) and insurance documents, nor are they licensed to practice law and insurance underwriting.

- *Conditions of the Contract*—Typically, these consist of the General Conditions and the Supplementary Conditions. General Conditions are typically preprinted standard documents prepared by professional societies such as (for architectural projects) the American Institute of Architects (AIA) and (for engineering projects) the National Society of Professional Engineers (NSPE), American Consulting Engineers Council (ACEC), and American Society of Civil Engineers (ASCE). Together, the listed engineering societies jointly publish documents as the Engineers Joint Contract Documents Committee (EJCDC). The Conditions of the Contract are discussed in greater detail in Chapter 9.
- *Drawings*—Graphic descriptions of the Work to be performed by the Contractor. The content of Drawings and the relationship between the Drawings and Specifications are discussed in greater detail in Chapter 2.
- *Specifications*—Written descriptions of the Work to be performed by the Contractor. The types of Specifications, their content, and specification writing principles and practices are discussed in greater detail below and in Chapters 5, 6, and 7.
- *Modifications*—Architect’s Supplemental Instructions (for contracts based on AIA A201, *General Conditions of the Contract*), Field Orders (for contracts based on EJCDC C-700, *General Conditions of the Contract*), Construction Change Directives (for contracts based on AIA A201, *General Conditions of the Contract*), *Work Change Directives* (for contracts based on EJCDC C-700, *General Conditions of the Contract*), and *Change Orders* (for contracts based on both AIA and EJCDC *General Conditions of the Contract*). “Modifications” are changes to the documents after execution (signing) of the Agreement. Prior to execution of the Agreement, changes are generally made using *Addenda*. Addenda and Contract Modifications are discussed in greater detail in Chapter 13.

Often the term “construction documents” is used as a synonym for “Contract Documents.” This is

incorrect. Simply stated, the Contract Documents are the documents identified in the Agreement. The Contract Documents, together with other documents used during construction, may be called construction documents. Contractually, this is a fine but important distinction. The Contractor, the Architect/Engineer, and the Owner are only obligated to perform according to the Contract Documents. Other documents may be required by the Contract Documents to be produced and used during performance of the Work under the Contract, including shop drawings, construction schedules, construction reports, meeting notes, submittals, installation instructions, test reports, permits, and certificates from authorities having jurisdiction, and operating and maintenance data. However, these are not Contract Documents, although most should become part of the “contract record documents,” which describe the completed Work of the Contract and which may be used by the Owner for operation and maintenance purposes.

### SPECIFICATIONS

Imagine a movie or video presentation of the construction of a building, park, water or sewage treatment plant, refinery, highway, or bridge. Imagine that all the activities of construction are shown in great detail, from procurement of materials and manufactured products, through fabrication, delivery to the job site, storage and staging on the job site, surface preparation, mixing, application, installation, fitting, and finishing. Also imagine the Owner, the Architect/Engineer, the Contractor’s managers and supervisors, the subcontractors, the testing and inspection agency personnel, the manufacturers’ representatives, and code authorities meeting and discussing matters related to the construction. Imagine the movie or video presentation without a sound track. There is not only no background music, there is no dialog. It would be very difficult to construct the facility based only on a silent movie. To properly understand the requirements and construct the facility, dialog is essential.

The relationship between the Contract Drawings and the Contract Specifications is equivalent to this dialog. The Contract Specifications are essential for complete understanding of the Work to be performed by the Contractor.

Most Conditions of the Contract recognize the significance of construction specifications and refer to the Specifications as part of the Contract Documents, with importance equivalent to that of the Drawings. Because of this, it is imperative that all

parties identified in the Agreement (the Owner, the Architect/Engineer, and the Contractor) understand the role of the Specifications and understand how the Specifications are used during bidding and performance of the Work under the Contract. Moreover, the Architect/Engineer should be just as skilled in preparing the Specifications as in preparing the Drawings. The documents are complementary and carry equal weight for interpretation of Contract requirements.

Unfortunately, the education of architects, landscape architects, engineers, specialty designers, construction managers, constructors, inspection personnel, code authorities, manufacturers, fabricators, installers, and applicators rarely includes more than superficial instruction in written documents for construction, including construction specifications. Perhaps this is because these parties are more familiar and comfortable with graphic documents (drawings) and computations (spreadsheets and calculations). Nevertheless, proper performance of the Work requires clear, correct, and adequate descriptions of the requirements of the project, including written documents called the “Specifications.”

While the future appears to hold major changes in the way construction information is managed and presented, including object-oriented, 3D computer-assisted drafting (CAD) that blurs the lines between drawings and specifications, the current separation of information into Contract Drawings and Contract Specifications for bidding and construction will continue for many years. It is essential that those who prepare and use these documents understand their purposes and properly integrate them.

To drive this point home, realize that attorneys and some construction managers understand information written on an 8½-by-11-inch page much better than they understand what is shown on a drawing. Although the General Conditions of the Contract may state otherwise, there is a tendency in a dispute to give greater significance to the Specifications than to the Drawings. This is a particularly good reason to apply as much care in preparing the Specifications as the Drawings.

### STUDY QUESTIONS

1. What are the three basic types of documents used in construction contracts?
  - a. Bidding and Contract Requirements
  - b. Drawings
  - c. Specifications
  - d. Marketing data

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2. Which of the following are included in the Bidding Documents but not in the Construction Contract Documents?
  - a. Instructions to Bidders
  - b. General Conditions of the Contract
  - c. Agreement Form
  - d. Bid Form
3. True or False? Specifications describe the construction in text form.
4. True or False? Construction specifications apply only to the Construction phase of a project.
5. True or False? Development of construction specifications for a project begins during the Contract Document phase.
6. True or False? Procurement documents include construction specifications.
7. True or False? Design-Bid-Build and Design-Build are two valid methods to procure a construction project.
8. True or False? Contract Documents are identified in the Agreement for a construction project.
9. True or False? Drawings are the graphic descriptions of the work to be performed by the Contractor.
10. The Agreement includes which of the following for the construction contract?
  - a. Summary of the work to be performed by the Contractor
  - b. Time within which work shall be completed
  - c. Amount of money to be paid by Owner to Contractor
  - d. All of the above