

Construction Administration

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Introduction

By completing the activities in this chapter, you will gain an understanding of the activities involved in construction administration. The following information is taken from the NCARB IDP Guidelines:

Construction Administration

Minimum Construction Administration Experience: 240 Hours

Definition: Tasks carried out in the architect's office include facilitating project communication, maintaining project records, reviewing and certifying amounts due contractors, and preparing change orders.

Tasks

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

- Respond to Requests for Information (RFI)
- Issue Architect's Supplemental Instructions (ASI)
- Process shop drawings and submittals
- Process Change Orders
- Review and certify contractor's application for payment
- Review material test reports
- Record changes to the contract documents
- Provide substantial and final completion services

Knowledge Of/Skill In

- Change order process
- Conflict resolution
- Construction conflict resolution
- Contractor application for payment
- Contracts (e.g., professional services and construction)
- Interpersonal skills (e.g., listening, diplomacy, responsiveness)
- Interpreting construction documents
- Managing quality through best practices
- Problem solving
- Product and material substitutions
- Project budget management
- Project closeout procedures
- Project records management
- Shop drawing review
- Site observation
- Team building, leadership, participation

resources

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

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

- Chapter 12.5 - Construction Contract Administration
- Chapter 13.5 - Construction Cost Management

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 14.4 - Construction Cost Management
- Chapter 18.7 - Construction Management
- Chapter 18.9 - Construction Administration

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

- Chapter 8.5 - Construction Contract Administration
- Chapter 9.4 - Construction Cost Management

Narrative

Construction contract administration services are the most time-consuming and record-intensive of all professional design services and delivering them requires patience and experience. Activities are time sensitive and carry increased legal ramifications. Efficient organization, timely execution, and thorough documentation are paramount for successful delivery.

Architects direct the exchange of project information and communications during construction and coordinate any architecture work to be executed at this stage in the project. They provide information to the contractor that cannot be fully discerned from the drawings and specifications, including information from other team members. In addition, the architect observes the work to determine that it conforms to the project design and reviews submittals, acting on them within a reasonable time to avoid causing project delays. Although architects tend to think of construction phase services as those provided on the project site, the majority of this work is performed in the architect's office. Proficiency in and knowledge of the skills and responsibilities required to manage the architect's construction responsibilities are as much a part of construction administration as walking the job site and interacting with the contractor.

For the individual practitioner, construction administration activities offer a chance to get out of the office. At the same time, many of these tasks must be performed in the office along with other projects that may be incubating in the computer. Among larger firms, a project may be transferred from the project management team to architects who specialize in construction administration when this phase is reached. Firms without dedicated construction administration departments typically rely on the project manager or project architect to execute these duties.

The *Emerging Professional's Companion* presents construction administration services from the design-bid-build viewpoint, since this is the most commonly used method of project delivery. In this approach, the architect performs construction administration services directly for the owner. In the design-build delivery approach, on the other hand, the architect is typically a consultant to the contractor and communications and lines of authority align with this contractual relationship. Fast-track construction scheduling requires the architect to perform construction administration tasks more rapidly because of the compression and overlap of project time lines. More information on delivery approaches is available in *The Architect's Handbook of Professional Practice*.

Team Relationships

The working relationship of the project team contributes to the effectiveness of construction administration services, both in the office and at the project site.

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.

Within the Office

Project team makeup can be influenced by the size and organization of the architect's office. An office without a construction administration department may realize fewer internal team changes during the construction phase because project staff assignments simply shift to accommodate the required services. While the project manager begins a regimen of trips to the project site, the team in the office provides support by helping with submittal reviews, document changes, and responses to requests for information (RFIs). The project designer, who also may be working on a new project, continues to play an essential role in design issues and the review of design-related submittals.

Before construction commences, make sure your contract with the owner includes required special services, such as a full-time project representative or special consultants. Services required in the owner-architect agreement that involve the architect's consultants must be specifically called for in your architect-consultant contracts. The AIA documents family provides this pass-through of services in companion contracts such as B101™, Standard Form of Agreement Between Owner and Architect, and C401™, Standard Form of Agreement Between Architect and Consultant.

Although they are not project team members, staff members responsible for maintaining an architecture firm's library of information on specifications and materials may also contribute to construction administration tasks. In particular, their cooperation is vital to the project team that must undertake research when the contractor needs a quick response.

Outside the Office

Friendly relationships that are beneficial both the architecture team and other project team members make for a smoother construction administration process. If owner, architect, and contractor forge a collaborative relationship, this attitude is likely to extend throughout the project team. The emergence of integrated project delivery is increasing the opportunities for a more collaborative management initiative.

Integrated project delivery involves early participation by the contractor in design development which allows the documents to progress more rapidly. Submittals can be prepared sooner, and documents can contain more information, requiring fewer clarifications. The end result is fewer RFIs, timelier submittal review and approval, and often an earlier construction start.

Another popular approach for achieving a collaborative relationship between the owner, architect, and contractor is "partnering," this is a process in which the parties jointly confront and manage project risks and establish and promote a nurturing project environment. This relationship is established through structured meetings designed to define project issues and goals, team responsibilities, and other essential project concerns. Partnering sessions are typically managed by an outside facilitator experienced in the process.

resources

AIA Contract Documents are considered the industry standard. Learn more at 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.](#)

A variety of additional owner-retained participants may be involved in work at the construction site. For example, some owners retain an in-house project manager, while others contract with a construction manager-adviser who specializes in construction. The banking or lending institution may want to monitor a project's financial aspects. The owner may have contracts with contractors or vendors who are not administered under the owner-architect agreement. All of these participants may have full interaction on the project as it is constructed, and the architect's job will be simpler if he or she develops good relationships with them.

Project Communications

Effective communications are necessary for project success because representatives of three entities (owner, architect, and contractor) are working together during construction. Multiple decision-makers can cause unnecessary work and frustration, not to mention potential miscommunication and delay. To keep things running smoothly, it is important to establish a protocol for communications, document routing, and lines of authority and review these procedures with all team members during the preconstruction conference.

The AIA documents require the owner and the contractor to communicate with each other through the architect about matters related to the contract for construction to ensure the architect is aware of all project communications. This requirement provides the architect with the information needed to fulfill his or her contractual responsibility to administer the contract between the owner and the contractor. It also alerts the architecture firm to actions or decisions that could adversely affect delivery of its professional services. The architect is required to certify that the construction, when complete, is in general conformance with the contract documents. If actions are taken or decisions made that would compromise the architect's ability to fulfill this charge, it is important to be aware of this as early as possible and to notify the owner promptly.

In design-bid-build projects, the architect's project manager is typically the primary project team contact with the contractor. Architecture firm staff members communicate with the project manager regarding their areas of specific responsibility, and the project manager passes information on to the contractor. Any consultants who work for the architect also communicate with the project manager rather than the contractor.

To clarify communications, the project manager usually asks the owner to designate a single contact for communications and approvals during construction. Other owner's representatives assigned to the project and consultants working for the owner then communicate with the project manager. Nonetheless, the architect copies the owner's team members on communications and correspondence in case they have authority that could affect the owner's approval process.

The contractor also typically has a single representative who communicates with the architect about the project. Any subcontractors working for the contractor ask questions or provide information to this individual, who then confers with the architect's project manager.

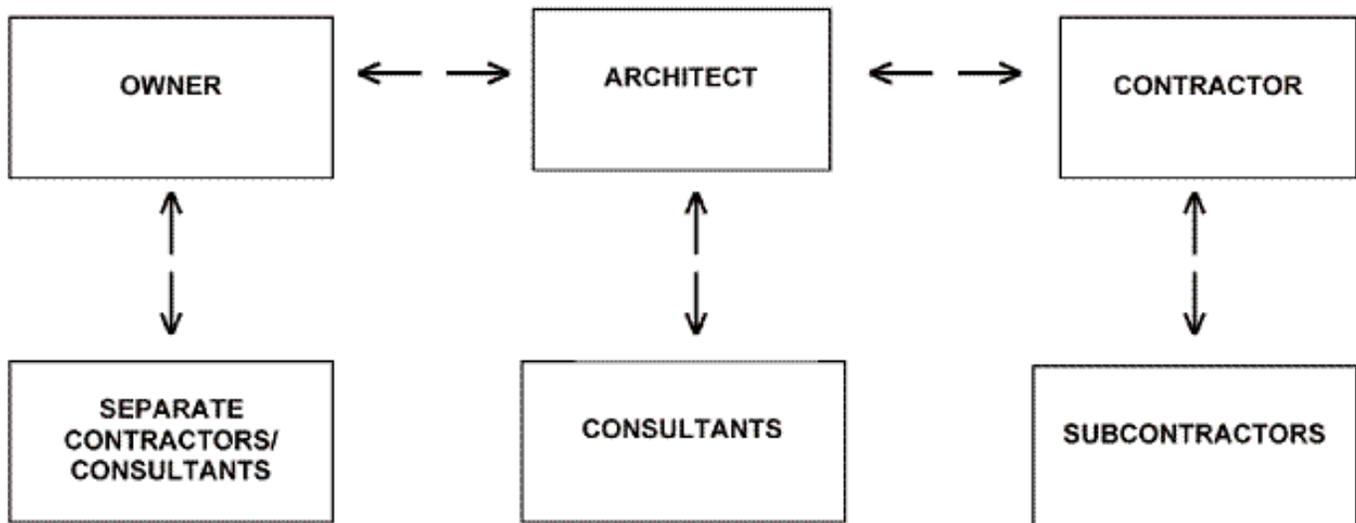
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Interaction between the project designer and the project manager is essential when submittals arrive and critical decisions are required. Therefore, these team members are typically copied on site observation reports and key correspondence, and they may also attend project meetings. Other team members in the office who are knowledgeable about specific building components and designs may also be included in the submittal review process.

The accompanying flowchart illustrates the traditional communications protocol in design-bid-build project delivery. Although the owner has a contract directly with the contractor, communications between the owner and contractor are conducted through the architect to facilitate the architect's responsibility to determine if the work is in accordance with the contract documents. Subcontractors and consultants, on the other hand, communicate through the holders of their contracts when passing information to other team members. This procedure allows the owner, architect, and contractor to be aware of and control their subcontracted work.

Typical Design/Bid/Build Project Team Communications Flowchart



Preparation

Preparation in the architect's office for construction administration activities includes compiling a complete set of construction documents, updating the office filing system and project team directory, and marshalling firm resources to support the project team.

An important management tool is the project database. This body of information contains the electronic history of the project to date. These systems can save much time when searching for historical data. Some company databases contain financial and labor data, which can be used to estimate service needs on future projects and to monitor profit status. A variety of management software is available, and the effectiveness and cost of these programs continues to improve.

The construction documents define the project scope, and the owner-contractor agreement requires that the finished work conform to the design. Errors or omissions in your documents convey a risk that could affect financial and professional stability. Therefore, it is vital that project documents be kept current and maintained in a safe and accessible location.

Project documents are only useful if you can easily locate the ones you need. It is wise to have a company filing protocol that is simple and adaptable so that all projects can be accessed uniformly. This will allow for

easy retrieval of documents in the future and make it easy to add documents relevant to the construction phase. Chapter 13.2 - Managing Architectural Projects, of *The Architect's Handbook of Professional Practice* provides sample categories for use in naming files. At a minimum, you should have project files close by and be familiar with them. If a construction administrator will lead the project team instead of the project manager, hard-copy project files may be transferred to the construction administrator's office.

Since documents today consist primarily of electronic data on a server, necessary safeguards must be imposed to back up the data and keep it safe. Many firms have developed a business continuity plan for this purpose. However, from a practical standpoint, the hard-copy set remains a useful tool. This is typically made up of all drawing sheets that have been published on the project since the contract for construction was signed.

AIA Document G807™, Project Team Directory, can be used to record contact information for project team members. When construction begins, add new participants to your project database. It is helpful to establish a list in your e-mail address file for distribution of project-related information. To make sure all project participants are included, check the owner-architect agreement for requirements regarding specific personnel. Also add any new owner representatives or consultants who will join the owner's team during construction. The contractor's team members should be introduced during the preconstruction conference. (Activities planned for the preconstruction conference are addressed in [Chapter 3C - Construction Phase Observation](#), on page 388.)

Architecture firm staff members who become involved at the construction phase should also be added to the team directory. Internal communications and participation should be defined early. Firm activities could include special submittal routing, design review, and progress reporting.

When the contractor's submittal schedule has been received, the architect reviews it for conformance with contract requirements and to determine if the sequencing and timing is reasonable for review by the design team, including its consultants. Be sure to determine if consultants in any outside specialties, such as curtain wall or roofing, should be involved in these reviews.

A list of project objectives and parameters should be maintained throughout all phases of service to enable the project team to focus on the owner's program. This can be manually documented or maintained in a database. Either way, a list of basic project information will help you provide consistent construction administration. AIA Document G806™, Project Parameters Worksheet, is a form designed to help maintain a single standard list of project parameters, including project objectives, the owner's program, project delivery method, legal parameters, and financial parameters.

The most important resource during construction is the project team. For the most part, they have been involved since the beginning of the project, and their collective knowledge can help maintain consistency in services. It is important to keep the team involved as much as possible until project completion. This is more difficult in larger firms, where team members may be assigned to other projects. The construction phase of

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a project lasts longer than the design phase, and reassignment of team members is a normal part of business. Because smaller projects require smaller teams, group fragmentation is less of a problem for them.

Office resources support the project team during construction administration. These can include a products library, a specifications library, a company project database, and in larger firms, specialists within the office. The sole practitioner must look outside for assistance, and a phone file on experts, specialists, and friends in the business can be a valuable resource.

Construction Start-Up

When the owner-contractor agreement has been signed and the construction phase begins, certain tasks are required to get things started. If the owner-contractor agreement does not stipulate a date when the work will begin, the owner may direct the architect to issue a notice to proceed. This directive establishes the date of commencement of the work. From this milestone, the date of substantial completion can be determined by adding the total construction time specified in the owner-contractor agreement.

The owner-contractor agreement defines the scope of work for construction. To avoid confusion and prevent disagreement, the general conditions of the contract for construction require the architect to provide the contractor with a hard copy reference set of the construction documents. This set should consist of three copies of the documents issued for construction, noted as the “contract set,” with signature lines provided for the owner and contractor. After the sets have been signed, the owner, contractor, and architect each retain a copy for reference. Be aware that any additions to this set of documents in the form of detail sheets or reissued drawings may result in a change order.

An effective alternative consistent with today’s technology is a digital copy of the contract set. The hard copy signature confirmation is replaced by the requirement that the recipient acknowledge the validity of the documents with a mouse click before the file can open.

The contractor is typically provided, free of charge, copies of drawings and project manuals as are reasonably necessary for execution of the work. The project manual is a volume assembled for the project, which may include the bidding requirements, sample forms, conditions of the contract, and specifications, among other documents.

A preconstruction conference is held to introduce project team members, establish communications protocols, and review relevant project matters. The architect prepares the draft agenda for the meeting and sends it to the owner and contractor for their input. Since construction activities are generally the same from project to project, a standard draft agenda can be edited for project specific requirements. Review the owner-contractor agreement and make additions or changes to the draft agenda as required. A sample agenda is shown in the Chapter 12.5 - Construction Contract Administration in *The Architect’s Handbook of Professional Practice, Fourteenth Edition*.

resources

AIA Contract Documents

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

AIA Document G709™, Work Changes Proposal Request, is a form used to obtain price quotations required in the negotiation of change orders.

AIA Document G701™, Change Order, is used for implementing changes in the work agreed to by the owner, contractor, and architect.

AIA Document G714™, Construction Change Directive, is a directive for changes in the work for use where the owner and contractor have not reached an agreement on proposed changes in the contract sum or time.

Construction Administration Activities

The architect's construction contract administration responsibilities fall into three categories: Document control, submittal review, and design clarification.

Maintaining Document Control

The architect is typically responsible for production of the construction documents. Part of this responsibility is controlling the content and distribution of these documents to prevent disruption and miscommunication among the project team. Construction documents continue to evolve during the construction process because of imposed changes. Changes can result from owner preferences, proposed contractor substitutions, material availability, or design errors and omissions. No matter their source, it is imperative that document changes be executed in a timely manner to avoid delays. Keeping up with the status of the construction documents and responding quickly to proposed changes will help to protect the architect from liability arising from project delay.

If permitted by the contract, the contractor may propose substitutions of the architect's specified products and systems. These proposals are typically submitted to reduce the cost of the work. To avoid compromise in the quality of the work, the architect should include a specification provision requiring substitutions to provide performance equal to or better than the product or system they supplant. Otherwise, a credit should be given when a lesser performing product is accepted unless an appropriate deductive change order is proposed along with the substitution. Remember, your specifications were developed after much research and trial. Consider proposed replacement products or systems carefully, and require the contractor prove to you that the substitution is worthwhile.

Changes in the work typically require changes in the construction documents. Ideally, the architect describes the scope of the change and its effects on adjacent work so the contractor can quote a price for the work. The architect initiates the change process by issuing a proposal request with attached drawings, specifications, and instructions as required to adequately describe the change. This process is undertaken to obtain price quotations required for negotiation of change orders.

When the contractor has prepared a quotation for the proposed change, a meeting is held to discuss the change and review the pricing. On larger projects, multiple proposals for change may be reviewed at one time. When the price for the change is agreed upon, the architect prepares and issues a change order. The proposal request and related pricing are usually attached along with a description of the change. A change order may include multiple work changes and/or proposal requests.

A change order is not effective until it has been signed by the architect, the contractor, and the owner. The architect's signature on the change order signifies the change in the project and in the documents is acceptable to the design team. Since the design professionals are responsible for the scope defined by the construction documents, the drawings and specifications should not be changed without their knowledge and consent. The design professional's signature also indicates a change conforms to the accepted standard of practice.

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Changes to the construction documents can be made in the form of a descriptive narrative, a modified drawing, or a modified section of the specifications. Any document that is changed and reissued must conform to the appropriate state statutes governing use of the design professional's seal.

Changes in the construction contract sum or completion date can be made without the contractor's consent by using a construction change directive (CCD). This document is used when the owner and contractor have not agreed on proposed changes in the contract sum or time. It was developed to address changes in the work that, if not expeditiously implemented, may delay a project. Upon receipt of the completed CCD, the contractor must promptly proceed with the change in the work described. It is recommended that a CCD be converted to a change order after the change in the contract sum or time has been determined.

Managing and Reviewing Submittals

Construction project submittals are prepared by the contractor and reviewed by the architect or an appropriate consultant. They include shop drawings, product literature, product samples, test reports, operating instructions and maintenance manuals, warranties from product suppliers and manufacturers, and designs or design calculations prepared in response to a performance specification. These materials are used to demonstrate how the contractor proposes to conform to the project design requirements.

As the holder of the prime design contract the architect is responsible for managing the distribution of submittals to all his or her consultants. This includes managing the routing of submittals and staying on top of time sensitive review schedules.

It is important that the contractor be required to provide a submittal schedule along with the construction schedule early in the project. On some projects, providing this information is a prerequisite for processing the first application for payment. The architect reviews the submittal schedule to determine if the sequences and time allowed for review are reasonable. A maximum time for submittal review is often stipulated in the owner-contractor agreement, and it is important to determine if the time allowed is sufficient. For example, receiving a large number of submittals at one time could make effective review impossible within the contracted time constraints. Also, if submittals for project detailing such as doors, frames, and hardware are not submitted at the same time, review will take much longer. A time period commonly stipulated for submittal review is 10 business days.

Submittals must be logged and tracked when they arrive in the architect's office. Untimely submittal review is a popular basis for claims for delay, and a submittal log can become the architect's best source for verification of submittal activities. Such a log can be maintained in hard copy or with a software management program. If a program is provided by the contractor, make sure the activities and tracking protocols of all participants are included in the log. Be sure to keep an up-to-date copy of the submittal log in a secure location as a backup.

resources

AIA Contract Documents

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

AIA Document G712™, Shop Drawing and Sample Record, is a standard form the architect can use to log and monitor shop drawings and samples.

RFIs & Supplemental Instructions

AIA Document G716™, Request for Information, is a 2004 addition to the AIA family of documents, although it has been in use in the industry for many years. The new document is generic and can be used by the owner, architect, or contractor to request information from any other party.

AIA Document G710™, Architect's Supplemental Instructions, is a form architects can use to issue additional instructions or interpretations or to order minor changes in the work that do not change the contract sum or time.

Autodesk® Buzzsaw™ is an online project collaboration service designed to manage building project information. It can be run within the Microsoft® Internet Explorer browser or as a stand-alone executable.

Assignment of document control numbers is necessary for effective management of submittals. You can use simple ascending numbers or a more elaborate numbering system. The contractor should affix the control number to the submittal upon receipt from a subcontractor or vendor and prior to submission to the architect. All submittals, along with all other correspondence received by the architect, should be stamped received and recorded immediately in the architect's submittal log so the dates in the log and on the document correspond.

The owner-contractor agreement and the general conditions of the contract for construction require the contractor to review each submittal prior to submission to the architect and mark them up with corrections and coordination notations prior to submission to the architect. Prior to the 2007 AIA Contract Documents revisions, a contractor's review stamp was required, however current AIA documents state that submission is a representation that the appropriate review has taken place.

When the architect has reviewed a submittal, it should be stamped with the appropriate review stamp. Such stamps typically indicate actions such as approved, approved as noted, revise and resubmit, or rejected. Wording on the stamp can vary, but should reflect the language of the owner-contractor agreement and the general conditions of the contract for construction.

Make sure team members familiar with specific building components and designs, such as the curtain wall system or doors and hardware, are included in the submittal review process. It is especially important to include the project designer, if different from the project manager, in the review of finish materials. To avoid taking on increased risk, architects should review only the submittals required in the specifications. However, the architect may review as-built drawings or designs by a professional hired by the contractor. In such instances, the submittals are reviewed with respect to their effect on the design intent and not for accuracy.

Clarifying Construction Documents

Construction documents can never be complete enough to answer every question a contractor or subcontractor may have. Thus, contractors often ask the architect to clarify what is expected when, for example, they are selecting products. The architect must provide these design clarifications in a timely and efficient manner. Whether you are answering requests for information or issuing supplemental instructions, your response timing may affect the construction schedule.

Requests for clarification usually come from the contractor in the form of a request for information (RFI), and e-mail is the popular medium for submitting them. RFIs are typically included in electronic document management software programs such as Buzzsaw™, although they can be managed manually. Documents the architect may request from the contractor include the submittal schedule or a pricing response to a work change proposal. RFIs should be logged and tracked like submittals. Since the RFI process is the most popular basis for claims by contractors, timely management and accurate tracking are essential. In the architect's response to an RFI, there is often a fine line between clarifying project requirements and adding scope to the contractor's work in the architect's review comments. When architects set out to clarify

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documents, they have to take care not to increase the scope of work. Contractors often claim scope has been added when an architect marks up shop drawings because it is tempting for the architect to “fill in” information that should have been included originally. Ideally, the architect will provide a clarification that includes no added scope when issuing supplemental information to the contractor. In the event the contractor believes a change in contract sum or time is involved and the architect agrees, the contract for construction should be amended to reflect the change.

Documentation

Construction administration services consist of many intangible activities, such as making decisions, giving directions, and taking actions, and the participants are judged by the timeliness as well as the accuracy of their performance. Accordingly, such activities are recorded in logs, confirmed in letters and memoranda, or recorded in a meeting report. This documentation is then available to support the quality of services rendered should anyone’s actions be called into question later.

All important conversations in which critical information is discussed and all important actions should be documented in writing. The architect’s documentation can include:

- Reports (meeting, site observation)
- Certifications (payment, substantial completion)
- Requests for information
- Additional services agreements
- Work change documents (change orders, construction change directives, architect’s supplemental instructions)
- Notices (to owner, contractor, surety)
- Miscellaneous communications

Documentation generated and maintained by the contractor can include:

- Submittals (shop drawings)
- Schedules (construction, submittal)
- Requests for information
- Certifications (work compliance, payment application)
- Design calculations (if required by specifications)
- Approvals (changes)
- Notices (to owner, architect)
- Punch lists
- Miscellaneous communications

Owner documentation can include:

- Approvals, authorizations (changes, notice to proceed, nonconforming work)
- Site civil information
- Requests for information
- Miscellaneous communications

A record of meetings, discussions, decisions, and approvals, if not recorded by the documents listed above, should be recorded in a meeting report, document log, transmittal letter, or memorandum. Finally, the architect may choose to keep a journal to record important project communications.

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Acronyms to Remember

- RFI - Request For Information
- CCD - Construction Change Directive

Meeting Reports

The meeting report is the most common method used to record actions taken and decisions made. If a meeting is not recorded, it is difficult to justify why it was held, as apparently no important decisions were made. A meeting report should include the following information, at a minimum:

- Project name Purpose of meeting
- Project number Issues discussed
- Date Decisions made
- Attendees Deadlines

The report should be compiled and distributed as soon as possible after the meeting. For repetitive meetings such as scheduled project meetings, the meeting report can be used as the agenda for the next meeting.

Document Logs

Repetitive tasks are best tracked by logging. A log should have all relevant information, including critical dates for initiation, receipt, and transmittal; action taken; and final disposition. Logs typically used by architects during construction administration include these:

- Construction documents issue log (usually cover sheet on drawings)
- Supplemental drawing log
- Request for information (RFI) log
- Submittal log (AIA Document G712™, Shop Drawing and Sample Record, can be used for recording submittal review data such as number of copies and dates received and transmitted.)
- Architect's supplemental instructions (ASI) log
- Construction change directive (CCD) log
- Work changes proposal request log
- Change order log

Related documents such as proposals for change and change orders should be cross-referenced in each log. All documents should be numbered for efficient identification and to avoid confusion.

Transmittal Letters

The most efficient method of recording the flow of information between parties is a transmittal letter. Transmittals document the exchange of project information and act as a checklist reminding the sender to tell the recipient what exactly is being sent, how the material is being sent, and why. For example, AIA Document G810™, Transmittal Letter, is designed to serve as a written record of the exchange of project information.

A transmittal letter should contain the following information:

- Project name
- Project number (if applicable)
- Date
- Sender's name and company
- Receiver's name and company (can be multiple)
- Complete description of transmitted material
- Method of delivery (courier, U.S. mail, etc.)
- Reason for sending
- Copies to others

Standard forms do not require a transmittal letter if they are tracked by a log because the forms contain the basic project information and the document and reason for sending it are obvious. Approved methods for delivering transmittal letters and standard forms between project team members should be discussed at the preconstruction conference.

Memoranda

A memorandum can be written to another person or to your file. While a memorandum can be presented in many graphic formats, the primary objective is to capture the information for future reference. At minimum, the following should be included in a memorandum:

- Date
- Project name
- Project number
- Subject
- Recipient (if appropriate)
- Author
- Subject matter
- Persons copied

The text of a memorandum can include discussions, conclusions, facts, or observations relevant to the subject. Sending the document to the participants and allowing them to respond with corrections or clarifications will give credibility to your written record.

Journal

Another documentation tool available to the project manager or construction administrator is the journal. This can take the form of a bound book, a ring binder, loose papers in a file, or data in a computer. Whatever its form, a journal can be used by the design professional for personal organization and documentation and as a place to prioritize daily activities. If the journal is kept chronologically in a book or binder, it will provide ready reference to historic events. The architect can maintain a separate journal for each project or a single journal that contains records of multiple projects.

Project Closeout

The project closeout activities administered in the architect's office are addressed in the owner-architect agreement. They include production of punch list modifications and additions, review of the contractor's closeout submittals, and preparation and issuance of the certificate of substantial completion and the final change order. More detailed requirements may be included in the specifications in Section 1 of MASTERSPEC.

Punch List

On large projects, preparation of punch list modifications and additions can be a big job. When multiple project team members review the contractor's punch list, the influx of revisions may require many hours to publish. It is wise to discuss project completion sequencing with the contractor before project completion is reached to anticipate punch list administrative needs.

Pre-punch items encountered on site visits can be discussed with the contractor and subcontractors to make them aware of areas of concern and to establish the expected level of quality. This should help streamline the punch list process.

Closeout Documents

The contractor's closeout submittals typically include warranties and guarantees, record drawings, as-built construction drawings, specifications and submittals, operations manuals, maintenance schedules, operations videos, and attic stock (extra materials). These items are usually submitted at once, filling up the project manager's office space. They must be reviewed to determine if the contractor has fulfilled its contractual requirements for closeout submission before delivery to the owner. The design professional does not review this information for accuracy, as that is the contractor's responsibility.

Final Change Order

When it has been determined that the work is completed under the construction contract, a final change order must be issued to reconcile outstanding contract issues. These may include the following:

- Allowance balances
- Contingency balances
- Unresolved unit prices
- Contract savings
- Reimbursement for owner accepted non-conforming work
- Reimbursement for scope reductions
- Contractor bonuses
- Contractor penalties
- Liquidated damages
- Deductions for additional design services
- Additional contractor general conditions costs
- Weather related time extensions
- Delay related time extensions

The final change order must be executed and included in the final application for payment before final completion can be achieved.

The construction phase brings the owner's project to reality, and its challenges and problems often linger in their mind longer than design phase experiences. The actions taken by the construction contract administrator during construction can become good memories or bad ones. Relationships can be built or lost by how well the architect administers and resolves the issues.

Written by James B. Atkins, FAIA

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notes

Understanding Procedures of the Change Process

Supplemental Experience for eight (8) Core IDP Hours

Changes are made on almost all projects. They can be caused by owner decisions, errors or omissions, or unforeseen circumstances such as differing soil conditions. Most projects require a final change order to reconcile allowances, unit prices or contingencies.

Changes in the contract tend to be questioned because they usually increase the contract price. Owners often do not understand or accept the causes and circumstances surrounding a change. The construction contract administrator must know the change process, manage it effectively, and take appropriate action so that the process itself does not penalize the project.

In this scenario, you are providing construction phase services on a four story office building. The project delivery is design/bid/build with a fixed fee construction contract. The building frame has been topped out, and the roof and exterior skin has been completed. The project was designed for a single tenant with the reception area immediately off the main entrance. Each floor is open with no circulation corridors.

The client calls you up and informs you that the prime tenant deal has fallen through. He now wants the building changed to accommodate multiple tenants. This will be the third change order on the project.

Activity - Core

View and download the following sample documents for reference:

- AIA Document G701™, Change Order
- AIA Document G709™, Work Changes Proposal Request

Prepare the appropriate change documents for administering the owner's requested change. The first document that you will prepare is the Work Changes Proposal Request. If possible, review change documents from an existing project and consult with your IDP supervisor, mentor or a senior construction administrator. When you are preparing the document, answer the following questions:

- How soon should I request the contractor to submit the price?
- Should I send a notice alerting the contractor of the change so that demolition can be minimized?
- What fee should I charge for this significant change in project scope?

You receive the contractor's quotation for the change, and it is time to meet with the owner and contractor to review the costs. Prepare a memorandum requesting a change order review meeting. As you prepare the memorandum, answer the following questions:

- Who should attend the meeting?
- Where should the meeting take place?
- What documents should I take to the meeting?

The owner approves the change in the meeting, and it is time to prepare the change order. As you do your work, answer the following questions:

- Which documents will be referenced in the change order?
- To whom is the change order sent to first for signature?
- What is the distribution of the change order?
- How will the change order be tracked on the contractor's application for payment?

Prepare a flow chart illustrating the change process and the documents involved including the meeting notice. Share your work with your IDP supervisor or mentor and make suggested changes.

Understanding Construction Phase Activities & Project Communications

Supplemental Experience for eight (8) Elective IDP Hours

In this scenario, the client is a private company, the delivery mode is design/bid/build, the project is a 10-story office building, and the owner has retained your architectural firm to provide contract administration services. You are planning your work to be performed during the construction phase – which meetings to attend and the routine tasks to be performed. The project team includes the following:

- Owner
- Owner's equipment contractor
- Architect
- Structural engineer
- M/E/P engineer
- Architect's site representative
- Contractor's project manager
- Two contractor superintendents
- Four contractor site foreman
- Mechanical subcontractor
- Electrical subcontractor
- Plumbing subcontractor
- Contractor's scheduling consultant
- Test lab representative

Activity - Elective

Please reference the following sources:

- [MASTERSPEC](#), Section 1
- *The Architect's Handbook of Professional Practice*, 14th ed. Chapter 12.5 - Construction Contract Administration

View and download the following sample documents for reference:

- AIA Document A101™, Standard Form of Agreement Between Owner and Contractor
- AIA Document A201™, General Conditions of the Contract for Construction
- AIA Document B214™, Standard Form of Architect's Services: LEED® Certification

Read the reference documents listed above thoroughly and prepare the following lists. (You may wish to consult meeting reports and communication documents from an existing project.) List the activities typically performed by the architect and the contractor during the construction phase. Categorize your listing based on contractor—subcontractor interaction, contractor-architect interaction, and architect—consultant interaction. Prepare a flow chart representing the lines of communication. Prepare a weekly schedule of the architect's activities. Answer the following questions:

- Which tasks will be ongoing?
- Which tasks will be intermittent?
- How often will the architect visit the site?
- What meetings will be held?
- Who will attend each meeting?
- How will payment applications affect the timing of site visits?
- How often should a field observation report be issued?

List the types of communications that will occur between the following parties during the construction phase:

- Architect – Owner
- Architect – Contractor
- Architect – LEED facilitator
- Owner – Contractor
- Owner – Architect – Contractor

Most of these activities will be repetitive, such as the architect reporting the work status to the owner, but some will be task driven, such as a construction detail resolution.

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

Questionable Stored Materials

Supplemental Experience for eight (8) Elective IDP Hours

Some ethical dilemmas may actually be illegal acts. In this exercise, you must determine whether an unlawful condition exists.

In this scenario, you are providing construction contract administration services for the interior of a small office building. The construction contract is based on the cost of the work plus a fee. The shell has been completed, and your contract is approximately 80 percent complete. You visit the project to review an application for payment and to determine whether the work completed is accurately reflected in the document.

The floor covering is carpet, and you are directed to a warehouse on site where it has been stored. You check the tags and find that 3,000 square yards of carpet is stored. You look at the application for payment, and it matches the information on the tags.

You return to your office and are checking a change that was made on the drawings when you see a handwritten note on the corner of the drawing. It says, "2,500 square yards total." You ask the interior design manager about the note, and she says that the carpet supplier was in the office, and they did the takeoff and left the note. It is a cost-of-the-work contract, and the owner pays for all materials. It appears that more carpet was ordered than necessary, and someone will end up with the extra carpet. Could the amount be the overage required by the contract for stored material, or is the contractor intending to keep the excess?

You call the contractor about the extra carpet. He says, "Don't be concerned, it's none of your business." But it is your business. You are required to determine if the stored materials are appropriate for the work. Although you are not responsible for measurements, you must explore the variation.

Activity - Elective

Please reference the following source:

- [AIA Code of Ethics and Professional Conduct](#)

Write out a plan for resolving the situation. There may be a legitimate explanation for the additional carpet, but what must first be determined? As you prepare your plan, answer the following questions:

- Does the owner want the extra carpet for attic stock?
- Could there be a separate contract in the works outside your contract?
- Could the overage be anticipated waste?

Remember that title to the product transfers to the owner upon payment, and the owner may not wish to purchase the extra carpet.

Your plan will include communication with the owner. Prepare a memorandum to the owner and contractor advising of your findings and requesting an explanation. Advise them that if none can be given, you will approve for payment only the yardage needed including reasonable waste.

Request that the carpet subcontractor provide his layout sheets for carpet cuts to substantiate the yardage.

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

Tracking the RFI Process On-Site

Supplemental Experience for eight (8) Elective IDP Hours

The RFI is the primary method for contractors to obtain clarifications from the architect regarding the intent of the contract documents. In recent years, the RFI has become a universal tool for obtaining information by the architect and owner as well.

Activity - Elective

Please reference the following sources:

- [MASTERSPEC](#), Section 013100
- Other files such as change orders, meeting reports, ASIs, CCDs, and journal entries, if available.

View and download the following sample documents for reference:

- AIA Document G716™, Request for Information

Track the full path of three contractor RFIs on an existing project in your office. Review the files and select RFIs that include drawing details provided by the architect.

RFIs that involve a supplementary detail from the architect often result in a change to the contract. In this case, the change should be administered through the prescribed change process using appropriate AIA documents. As you review the RFIs, answer the following questions:

- Did the sender also propose the fix?
- Did the RFI result in a change to the contract?
- What change documents were used to effect the change?
- Was there a dispute over the resolution of the change?
- Were consultants involved with the issue?

Locate the supplementary details provided by the architect and any revised contract documents reflecting the change. Answer the following:

- Did the architect revise the contract documents to reflect the change?
- Did the contractor include the change in their contractor marked-up drawings?

Prepare a report on the three RFIs describing how they were administered. Include copies of all supporting documentation. List everyone that was involved and their method of communicating. If the issue resulted in a change to the contract, list the documents used to administer the change. If meetings were held to discuss resolution of the issue, list the purpose of the meeting, the attendees and the resolution.

As a final step, answer the following questions:

- Was the RFI detail really necessary to express the design concept expressed in the contract documents?
- Should the contractor have generated the detail as a “clarification” drawing and part of the contractor’s work plan?
- Should the appropriate subcontractor have generated the detail as part of their shop drawings for that portion of the work?

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

Impartial Determination of Substantial Completion

Supplemental Experience for eight (8) Elective IDP Hours

AIA Document A201™, General Conditions of the Contract for Construction, and AIA Document G704™, Certificate of Substantial Completion, require the architect to render decisions impartially. This requirement is without exception, and it requires open, candid communication and disclosure.

In this scenario, you are providing construction contract administration services on a project that has substantial liquidated damage provisions for late completion as well as a generous bonus of \$10,000 to the contractor for each day of early completion.

The contractor has informed you in writing that the project is substantially complete, and you have conducted the appropriate inspection. You find that the project is substantially complete and available for the use intended on July 11, 2013, ten days before the contracted substantial completion date.

The owner calls you up and tells you that the punch list items will not be completed or corrected until five days after the contracted date, and you are to certify substantial completion at that time.

Activity - Elective

View and download the following sample documents for reference:

- AIA Document A201™, General Conditions of the Contract for Construction
- AIA Document G704™, Certificate of Substantial Completion

Review A201™ to determine the requirements for impartiality in providing professional services. Quote the section with a written description of its meaning in practice.

Write a memorandum to the owner and copy the contractor citing these provisions and advise of the accurate date of substantial completion. In the memo, advise the owner, based on the contracted bonus clause, the total bonus amount payable to the contractor.

Prepare a Certificate of Substantial Completion that indicates the date of substantial completion. Remember that the certificate will require two dates, the determined date of substantial completion, and the date of issuance. As you prepare your memorandum, answer the following questions:

- How can the memorandum be written to help the owner understand the requirements for substantial completion?
- What examples can be given to show that the completed work is available for the use intended?
- Should the bonus amount be added to the construction contract by change order?

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

Determining Construction Phase Workload

Supplemental Experience for eight (8) Elective IDP Hours

A thorough understanding of the activities involved in the construction phase is necessary in order to effectively plan and administer construction services. Knowing when activities occur will allow for load shifting and increased staffing to accommodate project demands.

This exercise will provide an overview of the construction phase work activities of a project based on the documents generated during the work process.

Activity - Elective

[View and download](#) the following sample documents for reference:

- AIA Document G702™, Application and Certificate for Payment
- AIA Document G704™, Certificate of Substantial Completion

Examine the files of a completed project in your firm to determine workload requirements based on the records listed below. Establish a graphic timeline for the duration of construction in monthly increments, and record the activities accordingly. As you begin your research, answer the following questions:

- What was the level of complexity of the project?
- Was project completion timely or late?
- Were owner scope changes reasonable or extensive?
- Was the project location local or out of town?
- Was the overall office workload heavy or average?

Examine the following project documents:

- *RFIs*: Review the RFI log and chart the number of RFIs processed each month during construction.
- *Submittals*: Review the submittal log and record the number of submittals processed each month. Determine if a submittal schedule was provided.
- *Meeting reports*: Review all meeting reports and record issues that required additional labor to accomplish or resolve.
- *Payment applications*: Review all application and certificate for payment forms (G702™ & G703™). Track the inclusion of approved change orders to determine the final contract amount, completion duration, and date of substantial completion.
- *Punch lists*: Review all punch lists to determine the amount of work remaining for completion or correction after substantial completion.
- *Certificate(s) of substantial completion*: Review all certificates to determine if the originally scheduled date was met.
- *Change orders*: Review all change orders and related change documents to identify issues and events that required additional labor. Record these on the timeline.
- *Site visits*: Review the field observation reports, and record the number of site visits conducted each month.
- *Staffing*: Query personnel assigned to the project to establish the amount of labor required during construction. Review timesheets if available. Determine the workload by total hours expended each month.
- *Personal journal/notes*: Review available journals and notes to identify issues that affected work requirements. Record significant issues on the timeline.

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

Determining Construction Phase LEED Certification Responsibilities

Supplemental Experience for eight (8) Elective IDP Hours

LEED is becoming widely accepted as the standard by which high-performance buildings are measured. This exercise will address the responsibilities of the project team's office responsibilities for LEED certification services during the construction phase.

Use documents from a completed project that has been LEED certified or is pursuing LEED certification as a case study.

Activity – Elective

Please reference the following sources:

- Completed LEED project documents
- [MASTERSPEC](#), Section 018113

Examine the files of a completed project in your firm to determine the construction phase – office responsibilities of the project team. Project documents from the completed LEED project include:

- Drawings
- Specifications
- LEED submittals
- Project materials cost data
- LEED action plans
- LEED progress reports

As you begin your research, answer the following questions:

- What is the LEED certification rating?
- Did the project achieve the certification level that was originally pursued?
- How were LEED submittals processed compared to typical project submittals?
- What was the total number of LEED submittals?
- What was the total cost of LEED related project materials?

Examine the following project documents:

- RFIs: Review the RFI log for LEED related questions.
- Submittals: Review the submittal log and record the number of LEED submittals processed.
- Meeting reports: Review all meeting reports for LEED related communications and activities.
- Change orders: Review all change orders and related change documents to identify LEED issues.
- Site visits: Review the field observation reports for observations related to LEED.
- Staffing: Query personnel assigned to the project to determine the amount of time that was required to administer LEED related activities and responsibilities.
- Personal journal/notes: Review available journals and notes to identify LEED issues that affected work requirements.

Assemble your findings in a report and categorize the findings based on typical construction phase office activities. Determine the premium in hours and costs to administer the construction phase—office portion of a LEED certified project.

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

Negative Results from Late Wind Tunnel Test

Supplemental Experience for eight (8) Elective IDP Hours

Building construction is not always performed in an orderly, sequential manner. In delivery variations such as fast-track, the design and construction activities are compressed and supplementary activities such as testing are not always performed in a timely manner. This scenario explores a complication in a building design introduced by untimely testing.

In this scenario, you are administering the construction contract on a fast-track schedule for a 20-story office building. The building floor plate is rectangular with rounded corners. The curtain wall system is segmented at the corners, forming sleek, curvilinear shapes.

The preparation of construction documents was accelerated; as a result, the building was not wind tunnel tested until after construction had begun. (For more information on wind engineering and wind hazard mitigation, see the [American Association for Wind Engineering website](#).)

By the time the wind tunnel test results are made available, the building frame is at the eighth floor level and the unitized curtain wall system is at the sixth floor level. Test results indicate negative pressures on the building of 115 psf at the rounded corners caused by an “airplane wing effect.” The original curtain wall design allows a maximum of 90 psf negative pressure. If the corners are not reinforced, wind pressure will overstress the curtain wall attachment to the building frame.

The structural engineer evaluates the impact on the increased pressures at the corners of the building and determines that braces must be placed above the ceiling at those locations. The braces are large, and they encroach on the perimeter slot air diffuser boots and ductwork.

Activity - Elective

Prepare an agenda for a meeting with the contractor, structural engineer, MEP engineer, curtain wall consultant, curtain wall subcontractor, and the owner. List the topics to be discussed and the decisions that must be made for designing and implementing the change while construction continues. As you prepare your agenda, answer the following questions:

- How will the mechanical and electrical systems be affected?
- Is involvement required by the curtain wall consultant?
- What elements of the building may need to be revised in the construction schedule, ceiling grid and tiles, interior framing?
- What other systems may be affected?

The meeting must address the impact of the change on existing building systems, as well as the contractor’s construction sequencing. The overall objective is to add the required additional bracing without negatively impacting the construction schedule. Ask yourself; what measures can be taken to complete the task as quickly as possible? How should the results be documented? What AIA documents should be used to implement the resulting change in the contract?

Prepare a schedule for developing a corrective design, issuing scope change documents, pricing the change, and issuing the change order. Include a request that the contractor be prepared to discuss time frames for implementing the change and coordinating it with the ongoing work.

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

Saved by a Scope Change?

Supplemental Experience for eight (8) Elective IDP Hours

Architects have both an ethical and a contractual duty to design projects that conform to applicable codes. In some cases, issues of nonconformance may become moot as the result of changes in scope. In this activity a mistake was made, but the scope was revised before construction. However, complications involving allocation of cost lead to an ethical dilemma.

In this scenario, you have been commissioned to design an addition to a junior high school. The addition consists of a basketball gymnasium with a weight room, locker rooms, and toilets. You complete your drawings and issue them for bidding. The bids are opened, and a contractor is selected. The successful bidder's price is significantly below the budget. A construction contract is executed, and a "Notice to Proceed" is issued.

As you prepare for the preconstruction conference, you realize that the toilet rooms do not meet ADA requirements. The changes required to make them compliant will add scope to the project and increase the cost. Although you have found the problem before the toilets are constructed, the additional costs for bringing them into compliance will exceed the budget.

The next day, the owner informs you that the school board has decided to allow the nearby high school to use the new gym. She asks you to give her a fee quote for revising the drawings to make the toilet rooms larger. You realize that you can correct the AIA noncompliance as you redesign the toilet rooms, and no one will be the wiser. No harm done or is there?

The owner mentions that the change in scope is possible because the bids came in under budget. She believes the extra money will allow her to enlarge the toilet rooms to accommodate the high school students.

Activity - Elective

View and download the following sample documents for reference:

- AIA Document B101™, Standard Form of Agreement Between Owner and Architect
- AIA Document G701™, Change Order
- AIA Document G709™, Work Changes Proposal Request

Prepare a narrative outlining action you should take in this scenario. Include an explanation to the owner regarding the ADA noncompliance and its potential impact on the completed construction. List each step in order of priority. Assume that the cost of enlarging the toilet rooms to accommodate the high school students will cost less than enlarging them to meet ADA requirements.

As you prepare your work, answer the following questions:

- Are substitutions available that could reduce the overall cost?
- What can you do to attempt to keep the project on schedule?
- What can you ask the contractor to do to help you with the changes?
- If the origin of the non-compliant design was the architect's error, should the architect absorb the cost to re-design?

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

Solutions for a One-Inch Code Violation

Supplemental Experience for eight (8) Elective IDP Hours

In this scenario, your firm has designed and detailed a vocational tech school building on which construction is nearing completion. The building inspector has discovered that the ceiling in a hallway serving as a means of egress is 1 inch lower than the 7-foot minimum height dictated by 2000 International Building Code Section 1003.2.4. It appears that the various subcontractors could not get all the utilities (e.g., structure, ducts, drains, sprinkler piping, conduits) into the space provided in the architectural working drawings. They are packed as tight as possible. There is no way to get a higher ceiling with all the utilities shown in the various engineering drawings. The bottom element is a duct that occupies 60 percent of the width of the hallway and runs its full length (45 feet), with branch ducts into adjacent rooms. Although the architectural drawings show a 7'6" ceiling (well above the minimum), the contractor installed the highest acoustical board suspended ceiling possible at 6'11" without consulting the architect.

You have been directed to investigate the circumstances and make recommendations for action that will eliminate this situation as an obstacle to getting a certificate of occupancy.

Activity - Elective

Answer the questions below as part of your investigation:

- Will your recommendation vary depending on who (if anyone) is responsible for the impasse? If so, why? If so, recommend a solution for each party that might ultimately be assigned responsibility for the error. To do this, you will have to identify all the types of firms associated with the design and installation of utilities typically located above a hallway ceiling.
- What documents would you examine to identify the responsible party (if any)?
- What should the documents say or show that would help identify any party that might be responsible? Suggest statements and types of drawings that would have been appropriate to include in the various documents to avoid this situation. Who should prepare such drawings or statements?
- Develop three solutions to physically solve the problem. Ask colleagues how tight space above hallway ceilings has been addressed in the past during the design phase. Past strategies might suggest a retrofit solution. Which of your three solutions do you prefer and why?

Write a narrative of the findings from your investigation and include the recommendation you would give to your supervisor.

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

3B

Processing an Unacceptable Substitution Request

Supplemental Experience for eight (8) Elective IDP Hours

It has become somewhat common practice for owners to solicit substitution requests beyond contract award in an effort to further reduce project costs. These requested changes do not always take into consideration quality or impact on adjacent materials. The architect may determine that the proposed substitution is unacceptable for use in the project.

Although the owner may elect to accept it, the architect is not required to change their drawings or specifications and take on the increased risk for a product they did not specify. If the architect revises their drawings and specifications and the product or system fails to perform, the architect can be held responsible.

In this scenario, you are providing construction phase services on a small retail center. The budget is tight, and the owner has solicited substitutions from the contractor after the construction has begun. The contractor has requested a substitution for the aluminum and glass storefront system. It is a brand that does not conform to your specifications, and you have experienced problems with it in the past. You have determined that it is not acceptable for use on the project.

Activity - Elective

Please reference the following source:

- [MASTERSPEC](#), Section 1

[View and download](#) the following sample document for reference:

- AIA Document A201™, General Conditions of the Contract for Construction

Prepare a memorandum to the contractor and owner explaining your position. In 500 to 800 words, explain why you do not want the product used on the project and recommend an alternate system that conforms to your specifications. Contact an approved manufacturer listed in your firm's specifications to obtain supporting information to include with the memorandum. As you prepare the memorandum, answer the following questions:

- How can the benefits of the specified system be best explained?
- What other storefront system can be identified that will reduce project costs?
- How can I style my memorandum to be helpful instead of combative?
- What other building components could be substituted to reduce costs?
- Should you offer to allow the rejected substitution if the owner agrees to indemnify you?

Assume the owner is persistent in accepting the substitution and directs you to include it in the project.

Note: Be mindful that you are not obligated to change your drawings as that would increase your risk for the substituted system. If this approach is taken, the system will become owner accepted nonconforming work. As such you should note it as an exception to the Certificate of Substantial Completion. These actions will require a detailed explanation to the owner.

Prepare a memorandum to the owner explaining why you cannot accept the product and explain that a qualification to the Certificate of Substantial Completion will be required. Base your narrative on factual information; refrain from emotional statements. Approach the memorandum as a chance to educate and enlighten the owner, and focus on performance and life-cycle benefits. Review and discuss your work with specialists such as a specifications writer or a senior construction administrator.

Share your work with your IDP supervisor or mentor and make suggested changes.

Certification of Nonconforming Work

Supplemental Experience for eight (8) Elective IDP Hours

The Certificate of Substantial Completion is an important legal document. It is a representation that the architect has determined that the work or designated portion is sufficiently complete in accordance with the contract documents so that the owner can use it for its intended use.

If work is certified by the architect that is later determined to be nonconforming, the architect may be determined to be in breach of their contractual responsibilities. It is therefore important that the architect documents all observed nonconforming work.

Typically, such work will be on the attached punch list, and the contractor will correct or complete it. Should the owner elect to accept the nonconforming work, it must be excluded from the certificate on an attached list.

In this scenario, you are providing construction phase services on an office building tenant finish out. You have issued a Certificate of Substantial Completion for the project. The certificate includes an attach punch list of items remaining for completion or correction and an attached list of owner accepted nonconforming work that has been excluded from the certificate.

The contractor has notified you in writing that the project is finally complete, and you are performing the inspection for final completion. When reviewing the work, you notice that the wrong type of wood trim has been used in the reception area. The area is complete and ready for occupancy.

Activity - Elective

Please reference the following source:

- *The Architect's Handbook of Professional Practice*, 14th ed. Chapter 12.5 - Construction Contract Administration

View and download the following sample documents for reference:

- AIA Document A201™, General Conditions of the Contract for Construction
- AIA Document G704™, Certificate of Substantial Completion

Review AIA Document G704™ to understand the definition of substantial completion. Review the section in A201™ on the owner's acceptance of nonconforming work. Prepare a memorandum to the owner explaining your subsequent discovery of the nonconforming work. Explain the condition thoroughly. As you prepare the memorandum, answer the following questions:

- Will the replacement of the work delay owner occupancy? If so, the project is not substantially complete.
- Is the work of a quality and appearance that it could be accepted?
- Should you recommend acceptance of the nonconforming work to the owner?
- Is the nonconforming work of such scope that re-issuance of the certificate is necessary?

Then,

- Assume the Owner rejects the work. Prepare a memorandum to the owner and contractor amending the attached punch list, adding the nonconforming work.
- Assume the Owner accepts the work. Prepare a memorandum to the owner and contractor amending the attached exclusions of owner accepted nonconforming work.
- Assume the Owner rejects it and remediation will delay occupancy. Prepare a memorandum to the owner and contractor advising that the work is not substantially complete and rescinding the issued certificate. Wait for the contractor's written notice that the work is substantially complete.

Share your work with your IDP supervisor or mentor and make suggested changes.

Design Not Suitable for Use

Supplemental Experience for eight (8) Elective IDP Hours

This exercise involves a design that complies with code but is not suitable for the intended use. Unlike designs that can be checked in a code book, the adequacy of this design must be measured by anticipating how it will be used. This activity underscores the importance of continuous scrutiny of the documents to determine if the design meets the functional needs of the user. It also emphasizes the importance of having the appropriate qualifications and experience to work on your design.

In this scenario, you are administering a construction contract on an emergency room addition to a hospital. The scope of the contract includes a covered emergency entrance with automatic biparting entry doors allowing a 5-foot clearance, a 10-foot wide entry corridor, and six emergency treatment rooms.

Project construction is nearing completion, and the contractor is ahead of schedule. You are getting an early start on our substantial completion inspection and have invited the owner to accompany you. As you inspect the entry doors, the owner informs you that the 5-foot width is inadequate to allow easy passage of a gurney with attendants. The owner demands that you correct the problem and expects you to pay for the change.

Activity - Elective

Develop a plan for addressing this design error. Consider the construction schedule, delay costs, occupancy of the building, city approval of the correction, space limitations, possible modifications to the existing door, your staff time for drawing changes, the change order to the contractor, and educating your staff for future designs. As you approach this problem you must ask yourself the following questions:

- How can this issue be approached with the least impact to ongoing construction activities?
- How can the submittal approval process be accelerated?
- How can the fabrication and delivery process be accelerated?
- If a temporary door is required, what type is most suitable?
- What will be the city requirements for a temporary certificate of occupancy?
- What actions are required to preserve the owner's confidence in my firm?

Prepare the following:

- List the steps involved in replacing the door with one that will suit the purpose.
- Prepare an agenda for a meeting with the contractor, and determine who should attend the meeting.
- Find out if approval is required in this jurisdiction to install a temporary door if another door cannot be delivered by the occupancy date.
- Write a letter to the city requesting a temporary certificate of occupancy until the new door can be installed.

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

Forced Substitution of Skylights

Supplemental Experience for eight (8) Elective IDP Hours

Substitutions have become a popular means of reducing the project cost after the construction contract has been executed. Many owners allow substitution proposals until project buyout has been completed. Substitutions during construction almost always result in a reduction in quality as well as cost. Owners are often enticed by lower costs, and they are not always as concerned about the reduction in quality – that is, until the substitution fails to perform as expected. Then it often becomes the architect's problem.

In this scenario, you are providing shell and core construction contract administration services on a corporate headquarters building for a top 100 corporation. The budget is large, and the project was hard bid. The successful contractor was almost two million dollars lower than the budget, and the talk around the job site is they “left most of it on the table.” This means they underbid the project significantly.

The elated owner relished in the found money and gave the interiors architect an open ticket. Finished were upgraded to Italian stone and exotic wood paneling. The desperate contractor began a vicious substitution assault to lower the project cost, with very little credit given back to the owner.

The building has an elaborate skylight system that is a central feature. The skylight has a custom profile, which is fitting for the overall budget. As the building enclosure is completing, the contractor submits shop drawings for the skylights. The submitted profile is an off-the-shelf model with many compromises in features and quality. You immediately reject the submittal.

The contractor responds that if he is required to submit the custom profile, he will miss the fabrication window and the project will be delayed. He offers a modest credit for the custom profile, and the owner accepts it.

Activity - Elective

Please reference the following sources:

- [MASTERSPEC](#), Section 013300

[View and download](#) the following sample documents for reference:

- AIA Document A201™, General Conditions of the Contract for Construction

Prepare a memorandum to the owner and contractor rejecting the proposed skylight system. Cite the requirements from A201™ and MASTERSPEC for adhering to the specifications and coordinating submittals with other activities such as fabrication and construction.

Advise the owner that you will not accept the substitution or change your drawings. Advise that the Certificate of Substantial Completion will list the substituted skylight as exclusion, and it will be designated as, “owner-accepted nonconforming work.”

Prepare a summary of the events that led up to the event, and list the actions that your construction administration group will take to avoid such an incident in the future. As you prepare the summary, answer the following questions:

- What contract requirements were not followed or enforced?
- What indications were apparent that would warn of such an incident?
- What actions could you have taken to avert the incident?
- How can you tactfully explain to the owner that they did not receive full value for money spent?

Share your work with your IDP supervisor or mentor and make suggested changes.

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