Shop Drawings & Submittals: Benefits, Legalities, and Liabilities

An Online Continuing Education Course for Engineers

Course Number: BS-1018

Credit: 1 Hour / 1 PDH / 1 CPD

Shop Drawings & Submittals: Benefits, Legalities, and Liabilities

Ken Lambert, CSI

Almost all construction projects utilize the formal process of submittals and shop drawings, whereby the general contractor/ construction manager (and their subcontractors and vendors) submit said documents to the project architect or project engineer. This formality can have significant benefits – including finding mistakes and oversights before they occur in the field, but they also have substantial legal and liability ramifications. What is the right and wrong way to manage and understand the submittal process?

For example, if an engineer approves a "faulty" shop drawing, and there is a loss or claim in the field as a result, what liability does the engineer have versus the GC/CM, subcontractor, vendor, or even the architect (if applicable)?

Note: For ease within this document we will consider "general contractor" and "construction manager" the same thing, and will often use the abbreviation GC/CM. In reality, there are some critical differences between a GC and a CM- however, both are considered the main means and responsibility of a project being physically built.

Submittals and shop drawings are a needed, though sometimes tedious, aspect of most commercial or civil construction projects. The AIA (American Institute of Architects) is a quality resource regarding the definition and responsibilities regarding shop drawings or submittals. Essential, and widely accepted, notations and guidelines include: *(The following is courtesy of the AIA 201 document.* ***Bolded*** *text is by the writer of this course, for emphasis.)*

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.4 **Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.** Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 **By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them,** (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so and **(3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.**

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 **The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be**

relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

Shop drawings are defined by the *Engineers' Joint Contract Documents Committee* (EJCDC) General Conditions of Construction as:

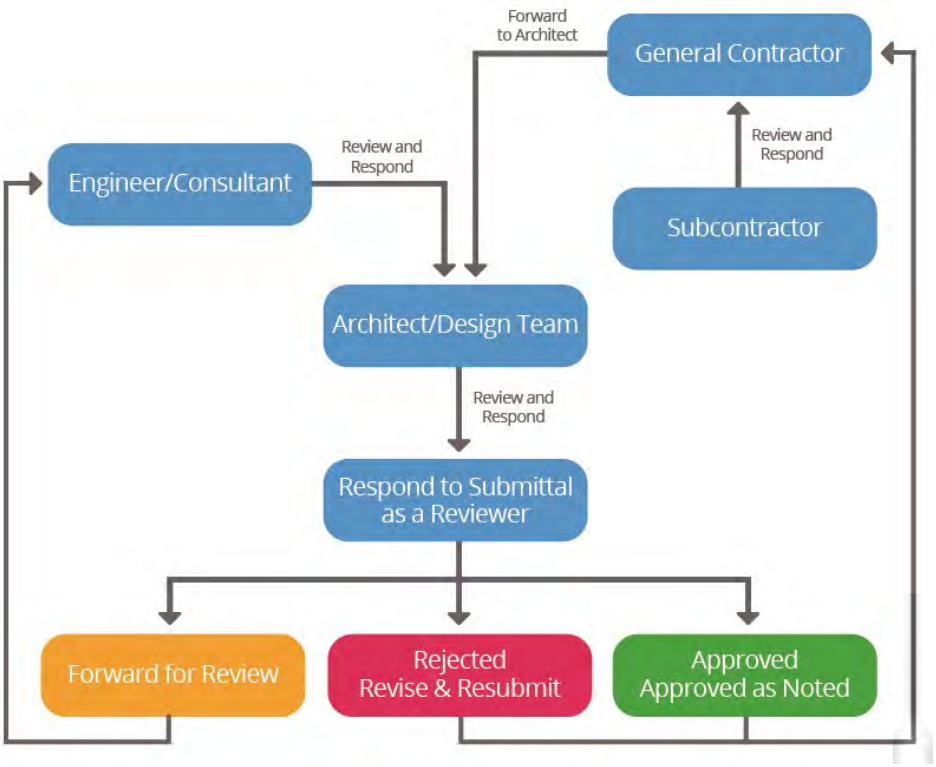
"All drawings, diagrams, illustrations, schedule and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work."

Another excellent definition of shop drawings comes from a publication from Wolters Kluwer (wolterskluwer%20ChapterSHAREDDESIGN.pdf written by Dennis J. Powers -Chapter 8) :

"The term 'shop drawing' generally refers to a supplier's, specialty contractor's, or fabricator's detailed depiction of information shown in the plans and specifications that explains or illustrates fabrication and installation. Such shop drawings are typically not prepared by the primary design professional. Rather, they are prepared in the chain of contractors and suppliers; and thus, they typically include not only an illustration of the fabrication and installation details for a particular component or system of a building but also an indication of the coordination of that component with other building components to ensure constructability in the field."

….

To better illustrate the process of submittals, included herein is a flow chart showing the standard process and parties involved: (from https://www.smartsheet.com/managing-construction-submittals)



When managed and implemented correctly and carefully by all parties involved, submittals (which do include actual shop drawings) have key benefits- mainly:

- They assist in the owner receiving a project/ building that is constructed well and to the full design intent of the contract documents.
- They help to catch and sometimes prevent issues which may physically arise in the field between distinct trades, and of obvious design/engineering errors within the contract documents.
- They assist with project management, and they also can help in the overall project schedule (if submitted and reviewed promptly).

However, there are several concerns and hurdles regarding the submittal process and task. These include legal ramifications, unseen or confusing liabilities, and other practical problems. Each subsection below will delve further into what to avoid and how to better accomplish the submittal process from the designer/engineer/consultant perspective.

Legal Concerns And Requirements

While there are standard rules and laws across the country, in some cases differing states and other jurisdictions will consider responsibility and liability differently. The differences can cause serious harm if unaware of them; this can often be the case where firms work in many states. Some of these issues surround the topic of what a project design team can delegate to contractors in regards to design- in the typical DESIGN-BID-BUILD delivery model.

As shown within the AIA definitions, it is the GC/CM's role to review and approve the submittals. According to https://www.csemag.com/articles/shop-drawing-approval-liability/,

Usually, it is a drain on the A/E firm's resources when the general contractor does not perform its function of submittal review prior to forwarding or having subcontractors forward the submittals directly to the engineer or architect.

For liability as well as financial reasons, it is a good general practice for design professionals to require the general contractor to have reviewed and approved the shop drawings before the A/E discusses them….

If the engineer or architect is always careful to require the general contractor's review and approval before reviewing the shop drawings, then the court is usually more comfortable with the A/E's limited role because there is an awareness that safety reviews and similar reviews are being performed by the contractor."

Differences do exist in regard to submittal liability between projects with a general contractor or that of a construction manager. In a CM setting, there is often a significant element of Design-Build protocol in the project delivery. With more design responsibility comes greater risk for the constructor in these cases.

There are general rules of thumb as to who receives the lion's share of the financial fines and penalties should a project go array as a result of submittals.

"For true GC contracts, the design professionals usually have the sole contractual responsibility for design approval, and the GCs and subcontractors contractual responsibility is to build per design. Hence the breakdown in these cases is GC about 20%, Sub about 20%, and the Designer about 60%," explains Attorney Stephen Kolberg (kolberglaw.com, of Boston, MA).

Thus in "normal" delivery projects, courts typically still place the substantial portion of professional and financial blame on the engineer or architect of record- in regard to a breakdown in correct submittals.

Kolberg, a construction lawyer for over 20 years, continues, "For CM at risk or D/B contracts, the CM's substantially greater design responsibility shifts those "blame" percentages significantly. In this circumstance, I'd break it down as GC about 50%, Subcontractor about 20%, with the Designer only about 30%,".

With all else being equal, if team, he/she will have about HALF of th n a General Contractor delivery method.

Each judge, jury, n g relevant case law in your area, a better .

One key aspect to a cally holding the money is keeping m ce companies can tie up cases and dispute enty of times where construction cases re because there is one party that desper sparring party. As detailed by Attorney K case: