

Fear of Shop Drawings: What Is the Process, Really, and Does It Need Fundamental Change?

The first in a series of Web seminars sponsored by the [AIA Construction Contract Administration](#) Knowledge Community

Following the debate surrounding the March 2010 article [Why We No Longer 'Stamp' Shop Drawings at Leo A Daly](#) , the AIA Construction Contract Administration Knowledge Community will present a webinar discussion of this controversial issue.

Dale L. Munhall, the author of the article, will discuss how to turn common misconceptions into innovation. As a counterpoint, Steven Shapiro, a construction manager and attorney, will present arguments for the more traditional approach to submittal review.

Fear of Shop Drawings: What Is the Process, Really, and Does It Need Fundamental Change?

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Fear of Shop Drawings: What Is the Process, Really?

What are “Shop Drawings,” contractually?

Per industry standard, AIA A201 General Conditions (this process has been approved by AGC)§3.12.1, 3.12.4:

“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... The 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.”

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What are the pitfalls of Shop Drawing review?

Examples of claims on actual shop drawings:

- *“Approval of this door schedule will take precedence over architectural drawings and specifications.”*
- *“Approval of these drawings by architect, contractor, or owner shall constitute acceptance for design, dimensions and conditions.”*
- *“At items requesting verification, if no notations made by architect or general contractor on returned submission, will be presumed correct as scheduled/detailed and fabricated/ordered accordingly.”*

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Contractors, via their shop drawings, illustrate their plan for *when* and *how* they intend to construct the Work.

Remember, the Architect's drawings and specifications, "The Contract Documents", are to define design intent, project scope and terms of the Construction Contract—they are **not** an instruction manual for ***how*** to assemble a building.

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So, it would be less confusing to call shop drawings what they actually are:

basic components of The Contractor's Work Plan—of, by, and for the Contractor's own use—to carry out their means and methods of construction.

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What “Shop Drawings” are NOT:

- **they are NOT part of the Contract Documents**
- **they are NOT the Architect’s work product**

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Then, **why do Contractors need to submit them?**

- to show the Architect how the Contractor plans to meet the *intent* of the contract's design requirements
- to confirm that both parties are 'on the same page'
- to uncover potential non-conformance (*and our last chance to uncover potential design conflicts!*) before materials are ordered and installed

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What are the Contractor's duties?

- 1. to prepare the specified Submittal Schedule for the Architect's review (and concurrence after it becomes satisfactory to both parties)**
- 2. to build-in time for adequate reviews and a potential re-submittal before material will be needed on site**

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Contractor's duties...

3. to thoroughly mark-up subs' work to *clearly* show how it will fit into the surrounding work

4. to Approve their own submittals from subs and suppliers *before* submitting to Architect for Review

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NOTE, per A201, §3.12.8:

*“Contractor shall **not** be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings...”*

*and, “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.”*

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For example, from a General Contractor's stamp:

“General Contractor's review shall not relieve Subcontractors or Suppliers of contractual responsibilities for any error or deviation from contract and subcontract requirements.”

and...from a CM's shop drawing stamp:

“Review is for general conformance with the design concept only.”

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What are the Architect's duties?

- 1. to evaluate for compliance with requirements of the Contract Documents and as *reasonably inferable* from the design intent (but not to make or allow changes to the Contract Documents)**

caution: architects can incur liability by giving inappropriate instructions or by making unauthorized changes on shop drawings!

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Architect's duties...

Think of it this way:

Our review is to carefully ‘approve’ for *conceptual* compliance—not to order materials or to give assembly instructions or coordinate subcontractors. We check for compliance with the Contract Documents because delays due to misunderstandings which could have been prevented at the shop drawing stage will impact our client’s project if not discovered before installation.

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Architect's duties...

- 2. to “*review and approve*” or take “*appropriate action*” on submittals, “*with reasonable promptness*”, allowing sufficient time, in the architect’s judgment, for adequate review (per A201 §4.2.7)**

What ‘*appropriate action*’ is the Contractor entitled to?

How ‘*prompt*’ is the Architect required to be?

What is the difference between ‘*review*’ and ‘*approve*’ ?

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What **'approval'** means, contractually, per A201 §4.2.7:

*“The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals... **but only for the limited purpose of checking** for conformance with information given and the design concept expressed in the Contract Documents... Review of such submittals is **not** conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation... **all of which remain the responsibility of the Contractor.**”*

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What **'approval'** means, if not fully explained...

Think of it this way:

Contractors (and many owners) **erroneously** believe that “*Approved by Architect*” means that “*the Architect is now solely responsible for this item*”. Knowing this, we must *proactively*—but gently—educate them at the start of CA about contractual roles and responsibilities. Then we have to firmly insist that the submittals process follow *all* the project safeguards spelled out in the General Conditions.

Fear of Shop Drawings: What Is the Process, Really?

What are the most misunderstood aspects of the shop drawing process?

Contrary to commonly held misconceptions:

- 1. ‘Approval’ by the Architect does not relieve the Contractor of full responsibility for any deviations, errors or omissions that the Contractor or any subcontractor may have made on a shop drawing.**

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Think of it this way:

Architects cannot shift responsibility for a code deviation or an error or omission that slips through on a *design submittal to code officials*, and neither can contractors shift their responsibility for a contract deviation or an error or omission that slips through on a *shop drawing submittal to the architect*.

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‘Approval’ by Code Officials is limited, too. An example:

“Approval has been granted in order to begin work...

Any omission of requirements on submitted plans or any omission during plan review shall in no way authorize violation of applicable requirements under the Kansas Fire Prevention Code. Plan reviews are provided as a courtesy of the Kansas State Fire Marshal, are cursory in nature, and compliance to the appropriate standards is expected.”

Such language would also clarify our shop drawing ‘approval’!

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Contrary to commonly held misconceptions...

- 2. Shop Drawings are not Contract Documents—they are part of the Contractor's work plan for means and methods of construction (not a design responsibility of the Architect) and cannot alter any requirements of the Construction Contract.**

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Think of it this way:

On *non-contract documents* like shop drawings, neither the Contractor nor the Architect can make substitutions or other significant changes that would alter the Construction Contract Documents without the Owner's signature.

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Contrary to commonly held misconceptions...

- 3. A professional's stamp/seal denotes authorship and legal responsibility; a shop drawing 'stamp' does not.**

Since shop drawings are strictly of, by and for the Contractor's means-and-methods work plan, it would be a violation of license law for architects to stamp/seal and sign them, as if shop drawings were professional design documents prepared under the Architect's supervision.

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Think of it this way:

Architects' Contract Drawings define the 'what and why' of *design* ; contractors' shop drawings define the 'when and how' of *construction*.

Fear of Shop Drawings: What Is the Process, Really?

Are fundamental changes in store for the traditional design-bid-build shop drawing process?

- 1. To avoid misconceptions, shouldn't architects stop the misleading tradition of 'stamping' and signing the contractor's shop drawings? (note: AIA contracts and other typical forms of Agreement do *not* require the Architect to 'stamp' the Contractor's shop drawings) but, if we stop 'stamping', what is the alternative?**

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alternatives to architects 'stamping' submittals...

- **Specify a Shop Drawing Transmittal Form/cover page containing the Contractor's Approval and signature, instructions, disclaimers, and contractual definitions of Architect's action taken (incorporating A201 language).**

Example of Action Codes: (in lieu of the word 'Approved'):

A = No Exceptions Noted

B = Exceptions Noted (do not resubmit)

C = Revise and Resubmit (See Notes)

D = Rejected

E = Not Required - Returned without Action

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Are fundamental changes in store for the traditional design-bid-build shop drawing process?

- 2. Are changes needed for CM at-Risk delivery?**
- 3. Or, for Design-Build delivery?**
- 4. Or, for Integrated Project Delivery?**