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A RISK MANAGEMENT PUBLICATION FOR ARCHITECTS AND ENGINEERS

The importance of shop drawings in the design professional's practice

By Steven R. Goldstein, Esq.[1]

While not all projects require the preparation of shop drawings, those that do present unique challenges and potential liability exposure to the design professional. Therefore, it is important that the design professional be aware of its obligation concerning the review and approval of shop drawings prior to the commencement of construction. Shop drawings are an essential element to many projects, providing detail as to how particular elements of a project are to be constructed and installed. The purpose of the shop drawings is to provide the contactor with sufficient detail to make certain that the items set forth in the shop drawings are properly and safely constructed.

For those projects requiring the preparation of shop drawings, it is imperative that the design professional address the following issues prior to construction and installation of the element set forth in the shop drawing:

1. What items require shop drawings;
2. Who is responsible for preparing the shop drawings;
3. When are the shop drawings to be provided to the design professional for review and approval; and
4. Are there any other parties that will be involved in the shop drawing review process.

Far too often, projects proceed without the necessary shop drawings or with shop drawings that contain errors. In both instances, the design professional faces potential liability exposure with respect to damages resulting from improper design of the item that was to be set forth in the shop drawing. Specifically, there are situations where the party retained to prepare the necessary shop drawing (i.e., contractor, sub-consultant, manufacturer, supplier) either improperly interpreted the design professional's project drawings and specifications or decided, on their own, that revisions needed to be made in order for the specified element to comply with the project drawings. In either event, such deviations must be identified and approved by the design professional prior to proceeding with construction.

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When an item set forth in the shop drawings deviates from the design professional's drawings and specifications often this results in damages to the owner and contractor. In such circumstances, all eyes immediately turn to the design professional to explain how this happened. Not surprisingly, the sub-consultant that prepared the shop drawings, the contractor and the owner each contend that the design professional had the ultimate responsibility to review and approve the shop drawings to make certain that they fully conformed with the design intent provided in the project drawings and specifications prepared by the design professional.

In those instances where there are no shop drawings, it leaves the design professional with few arguments in its defense. Similarly, when the shop drawings are either not reviewed or reviewed and errors are overlooked, again this limits the number of defenses available to the design professional. For these reasons, it is essential that the design professional demand that it be provided with the necessary shop drawings in a timely manner and that the design professional take the time to fully review the shop drawings in order to provide the necessary comments, if any, and approval. Proceeding in this manner greatly reduces and often eliminates issues involving errors with the sub-consultant's shop drawings thereby reducing the possibility of potential damages resulting therefrom.

Notably, arguments may be made that the sub-consultatnt who prepared the shop drawings should be held responsible for its own acts of negligence in improperly preparing the shop drawings or deviating from the design intent set forth in the project drawings and specifications. Arguments may also be made that the contractor knew or should have known of the deviation as it is the responsibility of the contractor to compare the shop drawings to the construction drawings prepared by the design professional prior to proceeding with construction. Proceeding in this manner should put the contractor on notice that there exists a deviation that needs to be addressed and resolved, with the assistance of the design professional, prior to proceeding with construction.

CONCLUSION

While it is understood that the time associated with preparing, reviewing and ultimately approving shop drawings may have an impact on the overall schedule of a project, the damages resulting from construction of elements that were contained within proper shop drawings are often significant. The result can be a delay of the project and costs associated with remediating

the condition. Therefore, when shop drawings are required it is incumbent upon the design professional to strictly comply with the above-referenced steps in order to protect itself at a later date from almost certain liability and damage claims by the owner and contractor.

This article is intended only as a general discussion of the subject topic and as such does not create an attorney-client relationship with the reader and is not meant to provide legal advice in any manner.

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Contractor Led Design-Build Meets A&E Professional Liability Coverage: What's Covered and What's Bare?

By John Droutsas[1]

According to the Design-Build Institute of America (DBIA) current statistics show that 40% of non-residential construction is design-build. The study concedes that a majority of these projects are larger in size (in excess of $10 million) but the trend is clear. Design-build continues to expand as a delivery method. And with residential construction mired in the worst recession since the Great Depression, design-build will continue to assume a more prominent role in construction at large not to mention in large engineering projects where it has traditionally been more utilized. One of the reasons touted for this trend is that design-build provides owners with a single point of responsibility. With responsibility comes risk of liability if the owner's expectations are not satisfied.

Architect and engineer professional liability policies are written to insure professional liability risks designers face. From an engineer's point of view what are the most common liability risks? Here are the most likely:

- Negligence in preparing plans, drawings, designs and specifications.
- Errors involving site surveys, soil testing, subsurface conditions, elevations and grading (sub-grade exposures).
- Failure to design a structure per minimum local building codes.
- Negligence in selecting, specifying or recommending building materials.
- Failure to detect faulty workmanship on the part of the contractor.
- Suits relating to costs or quantity estimates.
- Third-party bodily injury or property damage or workers' compensation claims.

As with almost all construction projects the analysis of risk starts with the contract. This article will discuss a number of issues that arise from contractor led design build contracts with an emphasis on the question of whether traditional architects and engineers professional liability policies cover the risk associated with each issue. Some risk management recommendations will be suggested in conclusion.

[1] Travelers Managing Claim Executive, Pt. Richmond, CA.

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Some design firm duties owed by virtue of the contract to the contractor-client create risks or obligations that would not exist but for the contract. Contractual duties that go beyond the common law duty meeting the professional's standard of care trigger most professional liability policies to exclude coverage for such contracted liabilities under contract exclusions in such policies. Some examples follow.

Warranties of Standard of Care or Performance

DBIA's standard design-builder-designer agreement contains this language in section 2.2.1: *"…if the Design-Build agreement contains specifically identified performance standards of aspects of the service…Designer agrees that all such services shall be performed to achieve such standards."*

This language constitutes a promise to achieve certain performance objectives. As such a claim for breach of this promise would likely be excluded from coverage under what is known as the contract exclusion that exists in almost all A&E professional liability policies. A typical exclusion reads as follows:

> ***C. Contract Liability***
>
> *This policy does not apply to any* ***Claim*** *based upon or arising out of liability assumed by an* ***Insured*** *under any contract or agreement, whether oral or written, except to the extent that the* ***Insured*** *would have been liable in the absence of such contract or agreement.*

The effect of this language in the DBIA contract is to raise the customary standard of care to which design professionals are judged, creating a performance result duty under the contract.

Contractors are typically held to a higher standard of care than design professionals: often there is a warranty that the construction will be defect free. If the design-build entity contract with the owner contains an express warranty or it is implied by law in some strict liability states for certain construction (usually residential), there will be a conflict between the ordinary professional standard of care and such heightened standards.

In addition, with the design-build entity responsible for both design and construction it is more likely that it may be held legally responsible not just for defect free construction but for sub-par performance of systems and the construction itself. HVAC systems can be constructed per code and plan but not provide the expected heating and cooling as an example. Water intrusion due to poor quality but technically code compliant building envelope installation is another example. If the engineer is sued under warranty, express in the contract, or implied as a result of sitting in the contractor's shoes as a

result of the design-build contract, there is likely no coverage. Once again the contract exclusion is the reason.

Liquidated Damages

Rarely found in professional liability contracts but often found in contractor-owner agreements, liquidated damages are damages that meet the requirement that they are impracticable or difficult to fix at the time of the formation of the contract and therefore can be enforced if such damages represent a fair estimate of compensation for the breach of contract. Usually in construction contracts liquidated damages are a fixed amount per day that a project is late beyond the scheduled date of completion or occupation. Such damages are not enforced without an express contract provision and therefore once again the contract exclusion to most A&E professional liability policies excludes coverage for liquidated damages. DBIA's standard form of agreement between design-builder and designer contains a liquidated damages provision in favor of the design-builder (Article 11.7.2) if such a provision exist against the design-builder in its agreement with the owner.

Construction Services

A&E professional liability policies exclude claims for faulty construction against the design firm if it performed or directed the means and methods of construction. Here is the Travelers exclusion:

> ***D. Cost To Repair Or Replace Faulty Workmanship***
>
> *This policy does not apply to any **Claim** based upon or arising out of the cost to repair or replace faulty workmanship in any construction, erection, fabrication, installation, assembly, manufacture or remediation performed by any **Insured,** including the cost of materials, parts or equipment furnished in connection therewith.*

The issue is whether the design-build agreement in any way makes the engineer responsible to control or perform the means, methods, sequencing or techniques of construction. If so, the above exclusion or one similar would likely apply.

Indemnity/Defense

The standard DBIA design-build contract for contractor led delivery contains an indemnity requiring the designer to "defend Owner, Design-Builder and their officers," etc. This defense obligation, involving paying for the owner or design-builder's attorney fees, would not exist but for the contract, which falls

within the very definition of the contract exclusion. It is interesting to note that the design-builder's indemnification provision in DBIA's standard form does not include such a defense obligation to the design-builder in favor of the designer.

Prevailing Party Attorney's Fees

When parties sue one another for breach of contract the winning party can collect its attorneys' fees under what is k known as a prevailing party provision. Because such fees would not be recoverable in the absence of a contract, legal fees if awarded to the design-builder against the designer, would not be covered under the contract exclusion.

Design-Build Exclusions

Some A&E professional liability policies contain an exclusion for claims arising from any professional services rendered pursuant to a design-build contract. And the standard DBIA contract form calls for removal of such exclusions. If your professional liability insurance carrier refuses to remove it you will have no coverage for that design build project.

Site Safety

Standard design professional services contracts typically exclude legal responsibility for site safety. However, since the design firm is now under direct contract with the contractor led design-build entity it may have what are known as flow down provisions that incorporate obligations contained in the owner-design-builder contract into the sub-consultant agreement between the design-builder and designer. One such obligation that typically exists in construction contracts is responsibility for the safety of workers and third parties that are on the construction site during the work. There ordinarily would be no liability to the design firm for claims arising from this obligation (with the exception of claims by the designer's own employees) without a contract and therefore such flow down incorporation of site safety duties may not be covered.

Final Risk Management Thoughts

It is important to spell out each party's responsibilities and scope of work to avoid misunderstandings as to who is responsible for what and prevent duplication of efforts for which there may be no compensation. One of the most devastating claims is for what is known as consequential damages. These include business interruption losses, lost profits, lost interest, overhead costs, legal expenses and other damages the claimant will argue flow from the negligence of the designer. Often these damages

dwarf the cost to correct the defective construction that delayed the project from meeting its scheduled completion date. The design-builder may be the claimant making the argument that the designer's negligence affected the construction efforts and cost such consequential damages. Consider including a mutual waiver of consequential damages. DBIA's form agreement has one in article 11.7 but allows an exception to it in the form of liquidated damages in sub-section 11.7.2.

Finally a limitation of liability that creates a cap of the designer's liability can serve to put a ceiling on its liability risk. Often limitations of liability set the cap at the designer's fee or a fixed amount that is negotiated as a fair limit in view of the financial rewards each party receives from the project.

This review of the coverage problems that may exist in design-build contract documents is not intended to discourage the use of this growing method of construction delivery. Instead, it is intended to offer reminders to promote fair and balanced contract documents to facilitate successful design-build projects for all parties.

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Claims Corner

A recent claim provides one example of what can go wrong in projects where Building Information Modeling (BIM) is used. Our insured was retained to provide engineering design services by the prime architect. The project was a school gymnasium. After construction started it was learned that a roof elevation had been missed or otherwise was wrong because the roof needed to be raised by two feet. It was determined that the architect was using BIM software while our insured was using CAD. As a result there were inconsistent dimensions provided between the CAD drawings prepared by our insured and those prepared by the architect. A change order included not only the costs associated with the column stub extensions and roof beam elevation but for other costs related to the "coordination issues" arising due to the use of CAD versus BIM. Our insured later determined that throughout the design and construction process there have been instances where the final drawings were not consistent with those designs that were approved by it as a result of this lack of conversion between the two design methods. This is an example of what can go wrong when the design team is not on the same page with respect to the use of BIM vis a vis CAD and when there is insufficient communication among the design team members.

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Legislative & Litigation Roundup

1. Kansas. The economic loss doctrine should not bar claims by homeowners seeking to recover economic damages resulting from negligently performed residential construction services, held the Kansas Supreme Court in David v. Hett Construction. According to attorney Mike Norris of Kansas City, the key factor seems to be that the owner has to allege that the contractor breached an independent legal duty (i.e. contractor failed to perform its work in a workmanlike manner), aside from the contractor's contractual duties. If the owner alleges an independent legal duty, he will be allowed to pursue claims for economic losses under a negligence theory. While this case could be interpreted as being limited to residential construction cases, the court's analysis of the economic loss doctrine seems to imply that the above rationale would extend to all cases involving construction service contracts. It appears that an owner could allege that an architect / engineer has an independent legal duty to perform their services in a manner that meets the applicable standard of care, and thus, the economic loss doctrine would not bar a tort action against such architect / engineer for economic loss.[2]

2. Maryland. A Court of Special Appeals decision, Heavenly Days Crematorium, LLC

V. Harris, Smariga and Associates, Inc., recently held that an Owner's request for waiver or modification of the certificate of merit requirements must be filed within the 90 day period after the suit is filed or the trial court has no authority to grant the waiver. The certificate statute calls for dismissal without prejudice (meaning it can be re-filed if not time barred) if the certificate is not timely filed. This decision makes the 90 day deadline more firm and enforceable. The case also allows counsel for the design firm to file that motion when timed to maximum advantage, without fear of it being denied on estoppel or waiver grounds. In this case, the grant of the motion was essentially a dismissal with prejudice as the statute of limitations had passed when it was granted.[3]

3. Nevada. Late last year a new Nevada Supreme Court Decision strictly enforced Nevada's Certificate of Merit Statute. On September 8, 2011, the Supreme Court handed down its decision in *OTAK Nevada, LLC v. Eighth Judicial District Court*, 127 Nev. Adv. Op. 53 (2011), granting extraordinary relief to the architect. In short, the Supreme Court held that any complaint filed without a valid Certificate of Merit is *void ab initio* (meaning as if it never existed). Thus, any such complaint has no legal effect and *cannot* be

[2] Thanks to Mike Norris of Norris Keplinger & Hillman in Kansas City for the report of this decision. Mr. Norris practices in Kansas and Missouri. His primary practice is the defense of design professionals.
[3] Thanks to James F. Lee of Lee & McShane in Washington, DC for report of this decision. Mr. Lee specializes in the defense of design professionals.

cured by amendment. Additionally, the Supreme Court held that each party that files a separate complaint must file its *own* Certificate of Merit. Other parties to the case cannot simply piggy-back off another party's Certificate of Merit. However, in a footnote, the Supreme Court stated it would not address whether claims of indemnity and contribution fall outside the scope of NRS 11.258(1) [Certificate law dealing with non-residential projects]. The practical implication of this decision is that if a party sues a design professional *without* a valid Certificate of Merit, the trial court *must* dismiss that complaint and *cannot* permit an amendment. While that party can file a new complaint *with* a valid Certificate of Merit, if any statutes of limitation have run in the interim, *those claims cannot be revived*.[4]

4. **New York Adds New Type of Professional Service Corporation for Design Professionals**

Effective January 1, 2012, a new option in business organization has been created by amendment to Section 1503 of the Business Corporation Law of New York State authorizing a new type of business entity to be known as a design professional service corporation or "D.P.C."

The new type of business entity will have some flexibility advantages over existing options, including, especially, giving businesses so organized the option of offering an ownership interest to those not holding professional licenses. There are, of course, significant restrictions such as, but not limited to, requiring that greater than 75% of the shares of stock of the corporation be owned by licensed design professionals. There are also filing and periodic disclosure requirements in addition to the various limitations on ownership by non-licensees, but this new option might be a good fit for those businesses that may benefit from the enhanced ownership flexibility it provides.

Obviously, one should solicit the involvement of qualified legal counsel before considering any business reorganization.[5]

[4] Thanks to Jean Weil of Weil & Drage for report of this decision. Ms. Weil practices in California and Nevada. Her practice is devoted to the defense of design professionals.

[5] Thanks to Bill Constant, Travelers Claim Counsel, New York, New York.

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