



## CONSTRUCTION

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# DELEGATED DESIGN IN A DESIGN-BID-BUILD PROJECT DELIVERY APPROACH THE PROFESSIONAL LIABILITY CONUNDRUM

## INTRODUCTION

The inclusion of "Delegated Design" scopes of work into the construction documents of a construction project blur the roles of the design professional of record ("DPR") and the constructor. The role of the DPR is to design and detail the project to define the expected configuration and quality of the completed project. The role of the constructor is to construct the project and be able to rely on the accuracy of the design developed by the DPR. Delegated design is the act of the DPR relinquishing design responsibility to the constructor for one or more specialty scopes of the work for the construction of a project. The conundrum that is created is the inability to allocate the design responsibility of the delegated design scope of work and the performance of the design. Case studies of projects where the delegated design scopes of work were found to be defective in their design have determined that the DPR is not responsible for that scope of work despite their primary role as the designer.

## THE PROCESS

The Design-Bid-Build project delivery approach is the manner in which design and construction projects have been traditionally executed. The Design-Bid-Build project delivery approach is explicitly intended to advance a construction project in a sequential manner. The Design-Bid-Build project delivery approach is intended to fully complete one phase of the design and construction project before another is initiated. The DPR is traditionally an architect or engineer retained by the owner to lead the design and technical detailing phase of a project and they assume full responsibility for the health, safety and welfare of the public who occupy the project. The sequence begins with the DPR developing the construction documents consisting of drawings and

specifications that define the scope of the work re-quired to construct the project. The construction documents are then issued to constructors to provide a price to build the project as described in the construction documents. The bids as well as the qualifications of the constructors are reviewed by the owner and a constructor is selected often with the assistance of the DPR.

Under the Design-Bid-Build project delivery approach the DPR is wholly responsible for the suitability for the intended purpose and accuracy of the design work de-fined in the construction documents and for the overall coordination of all aspects of the project. However, the resolution of disputes regarding the ownership and liability for defective design that have developed from a scope of work that was delegated has been inconsistent in determining professionally liability.<sup>1</sup>

## WHY IS DESIGN DELEGATED?

There are several reasons a DPR may choose to delegate a scope of work to the constructor. The construction design environment has evolved into various highly scientific and specialized sub-components that include multiple variables. The DPR is designated to integrate all of the components into a single set of construction documents. As the diversity of programmatic functions required of a project grows and the innovative use of new materials have become more prevalent, it has become increasingly difficult for the DPR to be the traditional “Master Builder” of the past, and assume general responsibility for the entirety of the project.

The manufacturers of construction materials continue developing new products that attempt to improve the ability to meet increased and evolving performance criteria. Construction assemblies have become increasingly complex and often include more material components than ever before. In turn the number of transitions and interfaces between the materials included in the assembly has increased exponentially, requiring more knowledge and sophistication to execute the assembly properly. As construction projects and technical detailing of project components have become more complex and specialized the DPR, at times, includes delegated design directives for the constructor in the specification section of the construction

documents. Delegating scopes of work effectively delays the completion of the design of that portion of the work until after the project has been bid and awarded. For portions of the work that the DPR delegates, the construction documents direct the constructor to retain its own licensed design professional for the design of that particular scope of work. Examples in which delegated design is often used is the design and construction of curtain wall systems, metal panel facades, fire sprinkler systems, steel stairs and precast parking garage structures.

New energy performance standards also require the DPR, the constructor and the material manufacturers to innovate and develop new approaches to address these standards. For example, curtainwall glazing that is composed of metal mullions and insulated glass units strive to maintain thermally broken exterior and internal surface all while managing pressure equalization, internal drainage, and air and weather tightness. ASHRAE 90.1 is the industry standard that determines the required thermal performance of all building components including walls, roofs and windows, based on the climate zone of the project. This is one of many standards that have accelerated the performance requirements of buildings at an extremely quick pace. While the DPR may be aware of the new standards, they may have limited experience with how to address the specific requirements and integration of each of the material assemblies. Due to the DPR’s responsibility for all aspects of the project’s scope of work and their primary responsibility to protect the health, safety and welfare of all occupants of the project, they will rely on the expertise of the constructor and/or the manufacturer to execute the design.

Another reason the DPR may include delegated design is the limitation of the DPR’s time and fee available to produce the construction documents. The DPR’s fee and design schedule typically limits its’ ability to explore design options. By delegating the design of portions of the scope of work to the constructor, the DPR is able to focus on the development of the project as a whole. The DPR, rather than fully designing the scope of work, will provide the constructor with performance requirements for the scope of the work that the constructors’ design must achieve. The DPR will then review them for conformance with the specifications, the design intent, integration into overall project, and may require the design to be altered.

1. The examples are detailed in the essay “Delegation of Design to the Contractor: Should the Con-tractor “Plan” for Problems?; Section 4 - What defenses exist for GC where design delegation has occurred?” by Bob Burchette & W. James Johnson, 2015.  
Examples where the constructor was found liable for delegated design damages: *Waggoner v. W&W Steel Co.*, 1982 OK 141, 657 P.2d 147, 151 (Okla. 1982); *D.C. McClain, Inc. v. Arlington County*, 249 Va. 131, 452 S.E.2d 659 (1995); *Appeal of Mercury Const. Corp.*, 80-2 B.C.A. (CCH) 14668, 1980 WL 2708 (Armed Serv. B.C.A. 1980); *Johnson v. Salem Title Co.*, 246 Or. 409, 425 P.2d 519 (1967).  
Examples where the DPR was found liable for delegated design damages: *Toombs & Co., Inc. v. U.S.*, 4 Cl. Ct. 535, 31 Cont. Cas. Fed. (CCH) 72149 (1984) aff’d, 770 F.2d 183 (Fed. Cir. 1985); *Henningson Durham & Richardson v. Swift Bros. Constr. Co.*, 739 F.2d 1341 (8th Cir. 1984).

## THE CONSTRUCTOR'S DILEMMA.

The constructor, in a Design-Bid-Build project, traditionally assumes the work in accordance with the well established "*Spearin* Doctrine," which states:

"... if the contractor is bound to build according to plans and specifications prepared by the owner, the contractor will not be responsible for the consequences of defects in the plans and specifications. This responsibility of the owner is not overcome by the usual clauses requiring builders to visit the site, to check the plans, and to inform themselves of the requirements of the work..."<sup>2</sup>

The constructor, as an agent of the owner, should be able to rely upon the accuracy or suitability for the intended purposes of the construction documents that the DPR has prepared for the owner. However, portions of the design that have been delegated or identified by the DPR as a performance specification<sup>3</sup> require the constructor to provide a design solution. This puts the constructor at risk for the designated scope of the work as the law attribute the authorship of such design to the constructor. The transfer of design responsibility is somewhat counter to the intent of the *Spearin* Doctrine and the Design-Bid-Build project delivery approach.

The intent of having the constructor develop a design solution is to leverage the specialized experience and knowledge the constructor has with that specific material or assembly. Complicating the constructors' task is that many times multiple products must be specified to provide a competitive bidding environment to deliver the owner the most cost effective and valuable solution. The products or manufacturers specified may be equal in terms of performance but the installation of the products can be vastly different and require the design to be developed by a subcontractor or manufacturer under the constructor's scope of work. While the constructor is providing the specific design, via the subcontractor, the DPR is still responsible to review the development of the shop drawings and coordination of the work, including affirming acceptable tolerances and interfaces of the delegated work with the entirety of the project. However, The DPR has no professional liability for the design of the material component or assembly provided by the constructor. When the constructor begins to design and submit drawings to the DPR for "approval" is when the question of liability is raised.

The constructor is commonly required to retain a licensed professional with the ability to sign and seal drawings in accordance with the requirements of the jurisdiction of the project. The seal applied to the drawings of the constructors' professionals' carries equal responsibility to protect the health, safety and welfare of the public as the DPR. However the conundrum arises when the DPR, upon review of the design, proposes changes. The constructor requires the DPR's approval to fabricate the work, and although the DPR may have changed the design and approved it, the DPR is not liable for the performance of that scope of work because it is signed and sealed by the constructors' professional. Therefore, constructor is liable for the performance of the design of that scope of work.

2. *Spearin v. U.S.* (248 U.S. 132 (1918)), 135-136.

3. Specifications in Construction Documents are either Design Specifications that "prescribes the material and methods to be used for contract performance"; or Performance Specifications that provide "a description of the desired results of performance of a product, material, assembly, or piece of equipment with criteria for verifying compliance." RS Means Illustrated Construction Dictionary. Hoboken, NJ: RS Means; 2012.

Delegated design, as well as the design of work that was not intended to have been delegated, has opened the constructor to liability for the accuracy of the design. The debate within the construction industry, with regard to design liability associated with delegated design and constructor proposed design modifications, can be traced directly to the landmark Kansas City Hyatt Regency Hotel catastrophe. In 1981, suspended walkways that connected the second and fourth floors across an open atrium, structural connections failed. The walkways fell to the lobby floor killing 114 people and injuring 216. The contractor responsible for manufacturing the walkways objected to the original design structural connections developed by the DPR during construction of the building due to constructability issues. Subsequently, the contractor proposed an alternate design that weakened the structural capacity of the walkway supports. The DPR, without performing a thorough review of the proposed design change, approved the revision. The design of the structural supports was not delegated and had been designed by the DPR. However, the design change developed by the constructor was not suitable to adequately support the structure and proved to be fatal.<sup>4</sup> The constructor was charged with faulty design, and the constructor filed a third party claim against the DPR for deficient design. The court ultimately threw the claim against the DPR out and found the DPR professionally negligent for not thoroughly reviewing the proposed design in accordance with the standard expected of a licensed professional. The DPR ultimately lost the privilege to work as a licensed professional engineer. The constructor was held liable for the defective design solution and ultimately the fatalities that occurred, which carried far more egregious legal punishment.

## CURRENT STATUS OF DELEGATED DESIGN

In the time since the structural failure at the Kansas City Hyatt the construction industry has not sought more regulation in the implementation of delegated design scopes of work in Design-Bid-Build projects. Design trade organizations have developed more aggressive contractual frameworks to protect DPRs from delegated design errors.<sup>5</sup>

Since 1997, the American Institute of Architects (“AIA”) has expressly acknowledged and approved the practice of delegated design. Section 3.12.10 of the 2007 edition of the AIA document A201 - “General Conditions Contract for Construction” states:

“§3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor’s responsibilities for construction means, methods, techniques, sequences and procedures. If professional design services or certifications by a design professional related to systems, materials or equipment are

4. Whitbeck, Caroline (1998). *Ethics in Engineering Practice and Research*. New York: Cambridge University Press. p. 116. ISBN 0-521-47944-4

5. Carl J. Circo, “When Specialty Designs Cause Building Disasters: Responsibility for Shared Architectural and Engineering Services,” 84 Neb. L. Rev. 162, 216-226 (2005) p. 164.

specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided

the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.”

As mentioned above, delegated design requires the constructor to retain the services of a licensed professional. The licensed professional is contracted by the constructor and therefore the constructor bears the liability for the design. The AIA contractual language focuses the responsibilities of the DPR as a reviewer and not as the designer.

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## CONCLUSION

Delegated design remains a subject of debate in the construction profession due to the traditional and expected duty of the DPR to design all aspects of the project and the duty of the constructor to build according to the design. Very few jurisdictions have a documented position that allocates liability for errors and omissions and the settlement of disputes that arise due to delegated design. As delegated design continues to be used in traditional Design-Bid-Build projects and new project delivery approaches evolve, professional liability for the design of a project continues to be a complex subject matter that is often at the center of conflicts as it confuses and redefines the traditional and expected relationship between the DPR and the constructor.

## ABOUT THE AUTHOR

**Eric Brodfuehrer** is a NCARB certified licensed architect, an AIA member and LEED accredited professional with specificity in Building Design and Construction (BD+C). He works within Navigant's Global Construction Practice in the analysis and resolution of technical disputes involving design deficiencies, scheduling, cost analysis, disruptions, errors and omissions, defective construction, standard of care, productivity loss and damages. His experience includes having worked for large architecture firms as a Project Architect and Project Manager. His work as a practicing architect included facilitating the execution of construction documents and construction administration, primarily in the Healthcare and Higher Education fields. He is a graduate of the University at Buffalo's Architecture and Planning program having completed an M.Arch degree. Eric is licensed in New York, Pennsylvania and Illinois.