The Shifting Sands of Design Liability—Can You Manage to Escape It, or Will You Struggle and Be Swallowed by the Desert?
INTRODUCTION

The construction industry has a productivity problem, both globally and in the United States. Globally, labor production in construction, since 1995, has increased at an average of 1% per year in contrast with 2.7% for the total economy and 3.6% for global manufacturing.\(^1\) In the United States, labor productivity in construction has actually declined since 1968 while other sectors such as agriculture and manufacturing have seen exponential increases of 16.1X and 8.6X respectively.\(^2\)

One of several root causes identified for the construction industries dramatic failure to keep pace is the rigid structure of construction relationships which discourage collaboration and lead to extreme risk aversion.\(^3\) In addition, traditional project management structures are viewed as encouraging fragmented, siloed, conflict based associations.\(^4\)

Efforts to make construction more efficient and reduce the overall cost of projects have led to new project delivery systems that rely on close teamwork and collaboration among all players. These systems often significantly increase the importance of the design process, lengthen the time frame for design and increase the number of parties who participate in the process. At the same time, many of the legal protections relied up by designers to shield them from claims are eroding. Owners are also seeking to

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\(^2\) *Id.*, pg. 23.
\(^3\) *Id.*, pg. 48.
\(^4\) *Id.*, pg. 49.
incorporate heightened standards of care in their design contracts at the same time, technology allows for the tracking of complex building performance metrics. Designers are being held to standards based on these metrics. These factors result in increased design liability for an expanded universe of construction companies.

This article will explore the construction project delivery system changes, the challenges and risks presented by these changes and will analyze strategies to allow companies to adopt and profit from these changes without taking on undue risk.

PROJECT DELIVERY – FASTER/CHEAPER/BETTER

Project delivery (the structure through which a project is built) has evolved from regimented, hierarchical models to those offering more flexibility and collaboration.

Traditional construction projects consisted of separate phases for the design, bid/contractor selection and construction. It is known as design/bid/build or DBB. Under this model, an owner contracts with a designer who develops a set of plans sufficient to obtain a permit and to allow construction companies to bid the plans with lump sum or fixed cost bids. The owner then contracts with the successful general contractor (GC) bidder and the GC then contracts separately with subcontractors.

All relationships under DBB are separated, direct communication between a subcontractor and the owner or designer is not allowed. Any questions about the plans go up and down a long formal chain of communication and authority. Changes can only be carried out through formal change orders involving several levels of decision making
and input from a number of parties. DBB is criticized for being too slow and too expensive leading to excessive disputes and less successful outcomes. In 2002 the National Institute of Standards and Technology (NIST) compared outcomes between DBB built projects and those built under the design-build (DB) model. They found that “overall, owner-submitted DB projects outperformed DBB projects in cost, schedule, changes, rework, and practice use . . .”

There are a number of other models which offer varying degrees of movement away from DBB in addition to DB (where the GC takes on both the design role and construction) such as Construction Manager at Risk (Owners representative takes on GC role), Design Assist (GC and subcontractors take on portions of design responsibility), and Engineering Procurement Construction (used primarily for infrastructure projects; engineering company handles all aspects of project and hands a turnkey project over to the owner).

INTEGRATED PROJECT DELIVERY (IPD)

IPD represents the complete evolution of project delivery away from DBB. In an IPD project, key project participants work in collaborative, integrated teams, sharing information and making collective decisions. As part of IPD, participants share both risk

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and reward in an effort to economically motivate greater efficiency and successful outcomes. The project team which includes the owner waive all liability among themselves so that roadblocks to successful collaboration are removed. Design is accomplished with the involvement of all project participants under the leadership of the project designer.6 In a perfect world, IPD represents a vehicle to avoid the costs and inefficiency inherent in the DBB system. However, most construction projects are not built in a perfect world.

In order to carry out an IPD project, a contractual framework must be created. Perhaps the most seamless way to do IPD is through the creation of a Single Purpose Entity (SPE) in which the primary parties form a company to carry out the project.7 The owner can either be a member of the SPE or the SPE can contract with the owner. The American Institute of Architects (AIA) favors this approach, and has created two IPD integrated form contracts: (1) AIA Document C195 – 2008 Standard Form Single Purpose Entity Agreement for Integrated Project Delivery and (2) AIA Document C196 – 2008 Standard Form of Agreement Between SPE and Owner for IPD. These contracts cover the collaboration, shared decision making, shared risk and reward and waiver of claims that make IPD a unique project delivery system.

An alternative to the creation of a SPE is a series of relational contracts between all parties that define relationships and govern all aspects of the collaboration, necessary to move the project forward. The relational contracts are used to create a virtual single organization from the individual entities. These contracts tend to be very complicated as

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7 Id., pg. 33.
they attempt to define in great detail multiple roles that are often quite a departure from traditional models. They tend to follow the more traditional structure of individual responsibility and accountability in a framework of collaboration.\(^8\)

Collaboration and shared decision making are the hallmarks of successful IPD systems. Under traditional models, each participant works in a silo handing off their work to the next link in the chain. The success of an individual participant is not related to the overall success of the project. In a fully integrated project, decision making is not vested in a single person. Rather, all decisions are made unanimously by a defined decision making body and are made having the goal of the best interests of the project.\(^9\)

The construction team in an IPD project is made up of primary and secondary participants. Primary participants typically include the owner, GC, project architect, engineer (depending on the project), and key subcontractors (depending on the project). These parties form the decision making team; although often the owner is given greater voting rights or veto power. When IPD is carried out through a SPE that includes the owner, the decision making body (the Governance Board) is formed by representatives of all members holding an ownership interest in the entity with the owner having a greater share of voting members.\(^{10}\)

Secondary participants are typically consultants, subcontractors, engineers, code experts, and key material suppliers. Secondary participants are there to advise primary

\(^8\) Id., pgs 33-34.  
\(^9\) Id., pgs. 7, 9.  
\(^{10}\) AIA Document C195-2008 § 8.2.
participants in their areas of expertise. They are not part of the decision making team, but participate in meetings in an advisory role as needed.\textsuperscript{11}

The collaborative emphasis of IPD might suggest that all tasks are done by the collective, but that is not the case. The hallmark of IPD is individual work, but collective results. Each participant in the project is provided with a clearly defined written work scope that is determined by the decision making team and is a part of the overall project work plan and schedule. These work plans are formulated very early in the project as they form the basis for each participant understanding expectations, risk and reward. The decision making team ensures that each participant understands and accepts their individual scope of work and their overall place in the project team.\textsuperscript{12}

The overall organization and ultimate success of an IPD project depends on a complex, comprehensive series of written documents. The following is a select summary:

- **Project Definition:** Provides critical information about the scope of the project and identifies all elements having a bearing on cost and schedule.\textsuperscript{13}
- **Risk Matrix:** Identifies the principle risks of planning, designing, constructing and commissioning the project and determines primary responsibility for managing each identifies risk.\textsuperscript{14}
- **Project Goals:** Sets out goals for the project and delineates Goal Achievement Compensation for reaching specific goals.\textsuperscript{15}

\textsuperscript{12} Id., pg. 13.
\textsuperscript{13} AIA Document C195-2008 § 5.2.1.
\textsuperscript{14} Id., § 5.2.3.
\textsuperscript{15} Id., § 5.2.4.
• Integrated Scope of Services Matrix: Lists each of the tasks requires to plan, design, construct and commission the project and identifies who has the primary responsibility for performing each task.\textsuperscript{16}

• Target Cost Proposal/Amendment: The proposal is the preliminary budget for the project. It is provided to the owner and, if accepted, it becomes the Target Cost Amendment and sets the goal for the cost of the project and is tied to compensation.\textsuperscript{17}

Design in an IPD environment depends heavily on the concept of Design Assist. The project designer creates work groups for design aspects, including HVAC, electrical, and lighting. These work groups handle the design of building elements under the umbrella scope of the Project Plan. Included in the Design scope are extensive pre-construction efforts to indemnity and resolve potential design conflicts, constructability issues, potential cost savings and component choices.\textsuperscript{18}

The scope of design in an IPD project is greatly expanded as is the relative importance and involvement of the project designer. With more people involved in the design process and design being closely tied to constructability and cost, with IPD, there are a greater number of plan iterations making version control and integrity of prime importance. Unlike traditional construction, the designer is not the project gate keeper between the GC and owner and is not responsible for resolving disputes. These issues are now handled by the decision making group.

\textsuperscript{16} Id., § 5.2.5.
\textsuperscript{17} Id., § 5.3-5.5.
Traditional construction methods are criticized for encouraging adversarial relationships characterized by numerous, inefficient legal claims. One of the key principles of IPD is that team members all sign a no suit clause in which they all agree not to bring any legal actions against other team members.\textsuperscript{19} Taken to its logical extreme, they agree not to seek contribution or indemnity from other team members in the event of a third party claim. These no suit agreements should also be signed by secondary participants. In a true IPD project, all disputes would be presented to the decision making team and would be decided finally by unanimous decision.

Under an IPD approach, success is project-centric. The focus is on collectively achieving shared goals rather than meeting individual expectations. With collaboration as the key, project team members must be chosen on the basis of their ability and willingness to work closely with others in a unified team environment. The Project Goals document contains project metric values and sets out reporting intervals to monitor progress of the project and completion of metrics and goals that will define success. The most important project metric is cost. The cost metric is defined by the Target Cost Amendment. In IPD, compensation rewards are provided for total project costs below the target. Penalties are provided for contrary results.\textsuperscript{20}

In addition to cost, other project goals and metrics include objective standards, easily verifiable, statistics or information generated metrics, such as: energy efficiency, water use, carbon footprint, or LEED status. Project goals can also include more subjective standards. Construction and/or design creativity are not easily verified, but

\textsuperscript{19} Id., pgs. 12-13.  
\textsuperscript{20} Id., pgs. 15-16.
success could be measured by the nomination for or winning of awards or it could be judged by an independent person or body.

Cost related project goals can also include metrics that continue after the project is complete such as maintenance costs where a building can be judged against other buildings of a like size and use. Creative compensation structures can be created such as future royalty payments for the annual meeting of building performance metrics such as energy or water use.

COLLABORATION IN THE REAL WORLD

IPD projects offer great potential savings, but are complicated. Creating a SPE to construct a single project will strike some as unnecessary. Drafting the series of complicated agreements necessary to accomplish IPD can be seen as too much work. Waiving liability without condition can be perceived as too risky. However, trying to force collaboration without the structure or incentives to carry it out invites failure.

One aspect of human nature that frustrates collaboration is expressed by the well-known Pareto Principle: In any group setting, 20% of the participants do 80% of the work. In the IPD context, motivated group members will take on extra work and will fill in gaps in order to save or facilitate the group’s success and progress. The decision making group must recognize this and provide rewards or punishment where appropriate.

Many owners will try to force collaboration without being willing to provide additional compensation. For example, a design professional may be asked to address
construction means and methods, product choices, scheduling issues, etc. with no increase to his or her base compensation. Subcontractors may be asked to provide input into design, constructability, component selection or value engineering where their only compensation remains their original bid for construction.

In addition, there are many dangers to insisting on collaboration without providing legal protections. Attempting a project under the guise of IPD, but without the waiver of liability creates serious risk. Under IPD, designers are asked to address many issues of constructability, means and methods and scheduling, all of which are not covered under an errors and omissions (E&O) policy. Under IPD, contractors are asked to address design issues. Design work is excluded from a commercial general liability (CGL) policy. Even if protections are in place from first party claims, firms need to protect themselves from third party claims for negligence in jurisdictions which have done away with legal protections based on privity of contract. Simply put, IPD performed with half measures without the complicated formal agreements increases risk to all parties.

**EVOLVING LEGAL FRAMEWORK**

As we have discussed, project delivery has evolved away from traditional DBB principles. Designers face a vastly different environment in situations where they become team members involved in all aspects of the project. In addition, the legal framework concerning design liability is also evolving toward one that presents increased risk to architects, engineers and contractors who are asked to participate in the design process.
Economic Loss Doctrine

Broadly speaking, the economic loss doctrine is designed to maintain a distinction between damage remedies for breach of contract and for tort. The term “economic loss” refers to damages that are solely monetary, as opposed to damages involving physical harm to person or property. The economic loss doctrine provides that certain economic losses are properly remediable only in contract.21

Judge Cardozo eloquently stated:

Defendant accountants owed to their employer a duty imposed by law to make their certificate without fraud, and a duty growing out of contract to make it with the care and caution proper to their calling but not a tort duty to make it without negligence. If liability for negligence exists, a thoughtless slip or blunder ... may expose accountants to a liability in an indeterminate amount for an indeterminate time to an indeterminate class. The hazards of a business conducted on these terms are so extreme as to enkindle doubt whether a flaw may not exist in the implication of a duty that exposes [accountants] to these consequences.22

Under this rule, claims against design professionals by contractors, subcontractors, subsequent purchasers for purely economic damages would be disallowed. However, courts around the country have allowed such claims in situations which greatly undercut the reach of the doctrine. The most cited exception to the rule is based on the existence of foreseeable harm. Design professionals who undertake contract administration, approving payment applications, monitoring the project’s progress, rejecting defective work, approving changes, certifying substantial completion

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21 Giles v. Gen. Motors Acceptance Corp., 494 F3d 865, 873 (9th Cir. 2007).
22 Ultramares Corp. v. Touche, 255 N.Y. 170, 174 N.E. 441, 444 (1931).
and, under AIA contracts, resolving project disputes, can subject contractors to damages that are foreseeable if the design professional carries out his or her duties negligently.

In the case of *US v. Rogers*, the court stated:

[T]he position of and authority of a supervising architect are such that he ought to labor under a duty to the prime contractor to supervise the project with due care under the circumstances, even though his sole contractual relationship is with the owner. . . . Altogether too much control over the contractor necessarily rests in the hands of the supervising architect for him not to be placed under a duty imposed by law to perform without negligence in his functions as they affect the contractor. The power of the architect to stop the work alone is tantamount to a power of economic life or death over the contractor. It is only just that such authority, exercised in such a relationship, carry commensurate legal responsibility.

Negligent misrepresentation forms another exception to the economic loss rule.

The Restatement of Torts provides authority for this exception. It states:

(1) One who, in the course of his business, profession or employment, or in any other transaction in which he has a pecuniary interest, supplies false information for the guidance of others in their business transactions, is subject to liability for pecuniary loss caused to them by their justifiable reliance upon the information, if he fails to exercise reasonable care or competence in obtaining or communicating the information.

Design professionals by their professional stamp, certify the accuracy of their plans and specifications. They certainly know that project participants will rely on their accuracy. As such, they can be sued by parties with whom they have no contract for negligent misrepresentation when inaccurate plans and specifications cause them damage.

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24 *Id.* at 134-135.
25 Restatement (Second) of Torts § 552 (1977).
These exceptions to the economic loss doctrine, in many states, expose design professionals to claims by remote parties for various kinds of monetary damages.

**Standard of Care – Design Professional**

The standard of care applicable to architects and engineers is the same as for other professionals, including lawyers, accountants, and others furnishing skills and services for compensation. That standard requires reasonable care and competence, although the professional does not guarantee correct or even the best professional advice, but merely reasonable care and competence.\(^{27}\)

Increasingly, owners are attempting to subject design professionals to higher standards of care or to obtain elevated warranties in their contracts. For example, provisions can impose on the design professional sole responsibility, regardless of the ordinary standard of care, for providing, that the design and construction of a project are free from defects. Owners can also seek heightened indemnity duties in which the design professional agrees to hold the owner harmless from any claims arising from errors, inconsistencies, or other defects in the design of the project.

**Performance Metrics**

In 1978, a Minnesota court stated:

Architects, doctors, engineers, attorneys, and others deal in somewhat inexact sciences and are continually called upon to exercise their skilled judgment in order to anticipate and provide for random factors which are incapable of precise measurement. The indeterminate nature of these

\(^{27}\) *Delmar Vineyard v. Timmons*, 486 S.W.2d 914 (Tenn. Ct. App. 1972); see also, Acret & David, *Malpractice, Architects and Engineers* § 1:1 (4th ed.).
factors makes it impossible for professional service people to gauge them with complete accuracy in every instance.\textsuperscript{28}

Since 1978, there has been a revolution in technology and information sciences. Where previously, the exact performance of a professional was incapable of being judged, now the exact performance of many building components can be measured and recorded. Software companies have developed programs to measure and track the performance of the following building components:

- Energy Performance;
- Water Management;
- Thermal Comfort (HVAC);
- Indoor Air Quality;
- Acoustics; and
- Lighting.\textsuperscript{29}

These metrics provide a wealth of information upon which the performance of design professionals can be measured. As such, they provide a contractual avenue to insert heightened standards of care or data upon which to base a claim for professional negligence.

\textsuperscript{28} City of Mounds View v. Walijarvi, 263 N.W.2d 420, 423–24 (Minn. 1978).

CONCLUSION

Today’s construction industry is beginning to accept the change necessary to inject more productivity and efficiency to address its decades long failure to keep pace with other areas of the economy. However, as with all revolutions, the changes present both opportunity and increased risk.

IPD as a concept presents opportunities for the productivity the industry lacks. The devil is in the details however as IPD is a complicated, detailed business. More importantly, IPD done on the cheap or without contractual protections inserts risk to all those who participate in the design process.

It is crucial to understand the risk movement away from traditional DBB presents. Design professionals need to obtain both E&O and CGL policies as they are asked to perform work outside the definition of professional services. They need to analyze their E&O policies carefully to ensure they cover contractual risk beyond the traditional standard of care for design professionals. They need to understand the status of the economic loss rule in the jurisdictions they work to assess the risk of third party claims. Contractors need to obtain coverage for design work. CGL policies do not cover the work of participating in the preparing of plans and specifications on any formal level. Increasingly, insurers are offering Contractors Professional Liability Insurance (CPLI) to cover this design coverage gap.

Design professionals and contractors involved in collaborative projects need to understand any limits in coverage of project only policies. Many OCIP and CCIP policies
except design coverage and do not enroll the design team. Serious questions should be asked of any project that requires close collaboration but does not offer the projections of the complete waiver of liability or a comprehensive project wide policy with adequate limits.

Many insurers are offering risk management programs tailored to the new project deliver systems. These companies can be a valuable partner in navigating the complex opportunities and risks presented by an evolving construction industry.

An understanding of the opportunity and risk presented by an evolving construction industry will allow companies to compete in this new marketplace and provide design expertise in a flexible and profitable manner working with new and ever changing delivery models.