Florida Law Review

Volume 58 | Issue 3 Article 2

July 2006

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CONTRACT THEORY AND CONTRACT PRACTICE: ALLOCATING DESIGN RESPONSIBILITY IN THE CONSTRUCTION INDUSTRY

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I. INTRODUCTION

How much does legal theory matter to lawyers who advise clients concerning building design and construction contracts? Theory thrives in contract literature, as philosophers and legal scholars search for justification, essence, coherence, and synthesis.[1] Lawyers litigating contract cases also invoke and confront theory to develop a case,[2] to attempt to persuade a court,[3] to transform the application of the law to particular facts,[4] or to account for the jurisprudence of a specific judge or court.[5] But of what interest is legal theory to construction lawyers in their everyday practice?[6]

This Article uses a current issue in construction and design contracts to explore that question. While the issue here is an inherently practical one, the analysis concludes that legal theory should matter a great deal to construction lawyers. It also muses on far-reaching consequences of legal theory important not only to the construction law bar and courts and arbitration panels deciding design liability disputes, but also to the professional and trade associations, insurers, and sureties that are the other key institutions influencing the liability environment for the construction industry. Perhaps those who address design and construction contracts

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1. *See generally* RICHARD CRASWELL & ALAN SCHWARTZ, FOUNDATIONS OF CONTRACT LAW (1994) (providing a selection of readings on contract law that emphasize economics and moral philosophy); A CONTRACTS ANTHOLOGY (Peter Linzer ed., 2d ed. 1995) (same).

2. *See, e.g.*, City of Mounds View v. Walijarvi, 263 N.W.2d 420, 422-23, 425 (Minn. 1978) (rejecting the plaintiff's argument that the court should abandon traditional rules governing the liability of a design professional in favor of an implied warranty theory).

3. *See, e.g.*, Caldwell v. Bechtel, Inc., 631 F.2d 989, 996-97 (D.C. Cir. 1980) ("In our view, the analysis of both Bechtel and the district court is overly reliant upon contract theory to the point of losing focus of the nature of the claim made here, which asserts negligence, rather than breach of contract.").

4. *See, e.g.*, Ortelere v. Teachers' Ret. Bd. of N.Y., 250 N.E.2d 460, 461-62, 464 (N.Y. 1969) (finding that a psychotic employee should be permitted to revoke her selection of retirement benefits that proved unwise, and reasoning that "traditional standards governing competency to contract" reflected a "primitive" understanding of mental faculties that did not "account for one who by reason of mental illness is unable to control his conduct even though his cognitive ability seems unimpaired").

5. *See* Alfred S. Konefsky, *Freedom and Interdependence in Twentieth-Century Contract Law: Traynor and Hand and Promissory Estoppel*, 65 U. CIN. L. REV. 1169, 1169-74 (1997) (discussing, among other points, how jurists with contrasting perspectives on jurisprudence and advocacy have analyzed whether a subcontractor's proposal may be revoked prior to acceptance but after the contractor has relied on the proposal in submitting a successful bid for construction work).

6. In this Article, the term "construction lawyers" includes not only lawyers who draft and negotiate design and construction contracts, but also those who advise industry organizations that promulgate contract forms and structures for construction projects and those who evaluate construction contracting arrangements on behalf of insurers and sureties.

without proper regard for legal theory may unwittingly tempt those institutions to abandon a contract response to commercial risk analysis in favor of a tort approach. Such abandonment, the argument concludes, could have most unfortunate jurisprudential and practical results. To begin, let us move from these abstractions to the extraordinarily practical environment of the contemporary construction industry.

Buildings must withstand hurricanes,[7] earthquakes,[8] fires,[9] and even terrorist attacks.[10] They must provide secure and appropriate living,[11] shopping,[12] and working environments,[13] accommodate the disabled,[14] use

7. *See* Blake v. Hi-Lu Corp., 781 So. 2d 1122, 1123-24 (Fla. 3d DCA 2001) (finding that in an action against a builder, a jury verdict in favor of a homeowner on claims for violation of the South Florida Building Code and negligent construction was proper, where the homeowner's roof could not withstand hurricane force winds).

8. *See* Walsh v. W. Valley Mission Cmty. Coll. Dist., 78 Cal. Rptr. 2d 725, 726 (Ct. App. 1998) (referring to a California building code requirement that school buildings must be designed to resist major earthquake forces).

9. *See* Foster v. Bue, 749 S.W.2d 736, 741 (Tenn. 1988) (discussing the potential liabilities of the supervising contractor and the trade contractor for fire damage allegedly caused by the trade contractor's construction of a fireplace flue, but finding that the plaintiff failed to prove that defendant's construction method either was in violation of the building or the fire code, or constituted a defect rendering the house uninhabitable).

10. *See In re* Sept. 11 Litig., 280 F. Supp. 2d 279, 298-301 (S.D.N.Y. 2003) (holding that the owners and operators of the World Trade Center buildings "owed a duty to the occupants to create and implement adequate fire safety measures, even in the case of a fire caused by criminals such as those who hijacked flights 11 and 75 on September 11, 2001"); Cipriani Fifth Ave., LLC v. RPCI Landmark Props., LLC, 782 N.Y.S.2d 522, 522-23, 529 (Sup. Ct. 2004) (denying a Rockefeller Center restaurant operator's motion to preliminarily enjoin the Rockefeller Center lessor from carrying out alleged violations of its lease obligations, including installing metal detectors to screen the restaurant's employees and guests after September 11, 2001).

11. *See* Trs. of Columbia Univ. v. Gwathmey Siegel & Assocs. Architects, 192 A.D.2d 151, 156 (N.Y. App. Div. 1993) (reversing a summary judgment dismissing Columbia University's claim against its general contractor for negligent design and construction of student residences that resulted in dangerous conditions).

12. *See* Lieber v. Macy's W., Inc., 80 F. Supp. 2d 1065, 1075-80 (N.D. Cal. 1999) (holding that department store access barriers violated Title III of the Americans with Disabilities Act, 42 U.S.C. § 12182 (1994)).

13. *See* Gast v. Shell Oil Co., 819 S.W.2d 367, 368, 371 (Mo. 1991) (en banc) (holding that a contractor could not be held liable in a wrongful death action brought by the parents of a gas station shooting victim where "the contractor's undertaking was to follow the [gas stations] owner's specifications," and the specifications were not "'so imperfect or improper that the . . . contractor should realize that the work done thereunder [would] make the structure or condition unsafe'" (quoting RESTATEMENT (SECOND) OF TORTS § 384 cmt. f (1965))).

14. Americans with Disabilities Act, 42 U.S.C.A. §§ 12181-12183, 12188-12189 (2005); *Lieber*, 80 F. Supp. 2d at 1075-80.

energy efficiently,[15] take advantage of new forms of technology,[16] meet demanding environmental standards,[17] and facilitate data transmission and communications.[18] A typical office building, shopping center, multi-family project, or manufacturing facility involves several highly specialized components and systems.[19]

Under contemporary construction practices, it is often inefficient for the design professional or firm that provides an overall project design to retain responsibility for all critical aspects of project design.[20] In an increasing number of projects, trade contractors, equipment and systems manufacturers and suppliers, component fabricators, and specialty consultants provide or arrange for important specialty designs.[21] This collaboration raises significant questions within the construction industry and for the lawyers, insurers, and sureties who serve the industry. Who should be liable for design defects under these circumstances? More importantly, what principles, process, and authority should establish the rules for allocating, insuring and otherwise managing design liability?

Contract practices in the construction industry have not yet adapted to the trend toward shared-design projects.[22] In the construction industry the

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15. *See* Erickson v. Oberlohr, 749 P.2d 996, 997-99 (Colo. Ct. App. 1987) (holding that evidence that a solar heating system promoted for its energy efficiency was incorrectly installed supported plaintiff's implied warranty claim against a builder-vendor).

16. *See* CIT Group/Equip. Fin., Inc. v. ACEC Maine, Inc., 782 F. Supp. 159, 160, 162 (D. Me. 1992) (enforcing liquidated damages provisions under a contract for the construction of an electrical generating facility that established a deadline for the contractor to conduct a performance test demonstrating that the facility met output and heat rate efficiencies at guaranteed levels).

17. *See* Colorado-Ute Elec. Ass'n v. Envirotech Corp., 524 F. Supp. 1152, 1159 (D. Colo. 1981) (involving a failure of air pollution control equipment described by the court as "extremely large, complex, technically intricate, and essentially irreplaceable now that it is in place").

18. *See* Robert D. Lane, Jr. & Ajay Raju, Wired Buildings: Extending the Last Mile of Internet Access to Commercial Tenants 12-13 (Aug. 2000) (unpublished paper, available at http://www.acrel.org/Documents/Seminars/a002158.pdf).

19. *See* Iris D. Tommelein & Glenn Ballard, *Coordinating Specialists*, J. CONSTRUCTION ENGINEERING & MGMT., Apr. 1998, at 1, *available at* http://www.leanconstruction.org/pdf/coordinating specialists.pdf. Sometimes the same is even true of residential construction. *See* St. Paul Cos. v. Constr. Mgmt. Co., 96 F. Supp. 2d 1094, 1095-96 (D. Mont. 2000) (involving a situation where, in addition to contracting with a general contractor, a residential owner also contracted with five separate trade contractors for specialized wiring work).

20. *See, e.g.*, Bd. of Educ. v. URS Co., No. 64496, 1994 WL 520862, at *1 (Ohio Ct. App. Sept. 22, 1994), *aff'd in part and rev'd in part*, 648 N.E.2d 811 (Ohio 1995) (specialty design for planetarium dome design); Prier v. Refrigeration Eng'g Co., 442 P.2d 621, 622 (Wash. 1968) (specialty design of ice rink).

21. *See generally* Alan B. Stover, *Construction and Design Contracts*, *in* CONSTRUCTION LAW § 3.05[3][d] (Steven G.M. Stein ed., 2005) (discussing "design delegation" and liability for architect's errors and omissions).

22. This Article explores in detail one of several legal issues relating to shared-design practices that were identified in an earlier article. *See generally* Carl J. Circo, *When Specialty*

two most common contract conventions, or project delivery systems, assume centralized responsibility for project design. In one of these conventions, the traditional design-bid-build system, the project owner or developer retains an architect or engineer to design the project and separately hires a builder to construct the project in accordance with that design.[23] The traditional system divides the construction process into three distinct phases that proceed largely in a linear manner. These phases are project design, followed by solicitation of construction bids or proposals, and finally actual construction.[24] When a project uses the design-bid-build system, the project owner enters into two main contracts for the project.[25] First, the project owner (who may either be the intended user of the project or a developer) enters into a contract with an architect who converts the owner's requirements and ideas for the project into detailed drawings and specifications.[26] The owner then uses those plans to find an acceptable building contractor.[27] Finally, the owner incorporates those detailed construction plans into a second contract, which is the construction contract with a building contractor who will, in turn, execute the plans.[28] In the second common project delivery system, design-build, the owner or developer engages a single firm both to furnish the complete design and to build the project.[29] Both systems presume that a single professional or firm working under a contract with the owner maintains ultimate design responsibility for substantially the entire project.

The practice of shared-design responsibility does not fall into either of these conventions. While the industry has noted the unique challenges that delegated and specialty designs present, industry responses to date fail to recognize that these practices raise new issues about the basis for imposing design liability.[30] This failure results in part from inadequate

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Designs Cause Building Disasters: Responsibility for Shared Architectural and Engineering Services, 84 NEB. L. REV. 162 (2005) (examining "the development, current legal status, and long-range legal implications of shared design"). Others, especially construction industry commentators, also have identified potential problems posed by specialty design, but the existing literature does not explore whether the optimum solution requires a comprehensive, contract-based approach. *See* sources cited *infra* note 30.

23. *See generally* 2 PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER AND O'CONNOR ON CONSTRUCTION LAW § 6:2 (database updated 2005) (discussing the choice of project delivery approach and making general observations about the design-bid-build delivery method).

24. *See id.* §§ 6:2, 6:3.

25. *See id.* § 6:4.

26. *See id.* § 6:2.

27. *See id.*

28. *See id.* § 6:4.

29. *See* James S. Schenck, IV, *Introduction*, *in* THE DESIGN/BUILD DESKBOOK 1-1 (John R. Heisse, II & James S. Schenck, IV eds., 3d ed. 2004).

30. *See, e.g.*, Mark C. Friedlander, *Design-Build and M/E Systems: Some Legal Concerns*, CONSULTING SPECIFYING ENG'R, June 1, 2001, at 13 (stating that the law is developing to allow

attention to the controlling theories of liability. At the very least, legal theory must furnish the context to facilitate practical adjustments in contract practices.

This Article argues that the liability risks arising from contemporary shared-design practices should drive the lawyers, professional and trade associations, insurers, and sureties serving the construction industry toward innovative contract and risk management solutions. This new approach to allocating design liability must recognize that shared-design responsibility creates an interdependence among those who design and build project components, a relationship that requires a more comprehensive contract solution. What is just as important is that if the industry collectively fails to establish workable contract models, the courts will inevitably intervene with less efficient and less effective tort solutions.[31]

As these introductory remarks suggest, the analysis here concerns itself with legal theory as well as with industry practices. This is so because shared-design practices create multi-party commercial relationships that test the boundaries between tort law and contract law. In the end, however, the inquiry here is a practical one that resorts only subtly to legal theory.

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design delegation); Milton F. Lunch, *Revised A201 Leaves Many Design Delegation Issues Unclear*, BLDG. DESIGN & CONSTRUCTION, Dec. 1997, at 29 (explaining that revised A201 still "leave[s] unanswered a host of questions that ultimately will be resolved by court decisions"); Ralph C. Nash & John Cibinic, *Delegation of Design Responsibility to Construction Contractors: What Are the Risks?*, NASH & CIBINIC REP., Nov. 1993, at 65 (analyzing whether Government agencies "can avoid liability by . . . delegat[ing] . . . design responsibility [to construction contractors] and whether it is wise for the Government to do so even if liability can be avoided"); Carrie Okizaki, *Design Delegation*, *in* THE CONSTRUCTION CONTRACTS BOOK 285 (Daniel S. Brennan et al. eds., 2004) (discussing the controversy in the construction industry regarding the "extent to which a design professional may delegate to a contactor the responsibility for designing certain aspects of a project"); Nancy N. Potter, *Design Delegation Provisions of AIA Document A201, 1997 Edition*, CONSTRUCTION LAW., July 1998, at 30 (discussing whether "the new A201 . . . merely 'codif[ies]' existing practice without significantly altering the method of design delegation"); Iris D. Tommelein & Glenn Ballard, *Coordinating Specialists*, J. OF CONSTR. ENGINEERING AND MGMT., Apr. 1998, at 1, 10 (explaining the coordination and management challenges in specialty design projects); Editorial, ENGINEERING NEWS-RECORD, Sept. 30, 1991, at 110 (asserting that contractors and other non-design firms "should be able to voluntarily perform design work collateral to their construction or supply activities under the careful supervision of licensed professionals").

31. Left mostly for another day is the arguably more troubling probability that industry lobbyists will convince legislators and regulators to craft biased political and bureaucratic solutions. *Cf.* Gen. Bldg. Contractors of N.Y. State, Inc. v. N.Y. State Educ. Dep't, 670 N.Y.S.2d 697, 698-700 (Sup. Ct. 1997) (reflecting conflicting lobbying efforts of industry trade associations to influence regulation of delegated design responsibility); Allen Holt Gwyn & Paul E. Davis, *Fifty-State Survey of Anti-Indemnity Statutes and Related Case Law*, CONSTRUCTION LAW., Summer 2003, at 26 (reporting on the increasing number of state legislatures that have passed statutory restrictions against broad indemnity provisions in construction contracts).

To the extent that the practical argument here advances a theoretical one, it is that tort theory threatens to become a pervasive force in allocating liability arising from shared-design practices, yet a tort approach is inherently inferior to a contract approach for allocating liability for property damage and economic injury in light of the commercial relationships involved. As a result, the construction industry, with the enlightened assistance of lawyers representing industry participants, should evolve new contract conventions to address the unique liability issues that shared-design practices present. Not as an entirely incidental observation on long-extant scholarly ruminations, this Article supports contract as a dynamic force, at least for the continued vitality of the commercial construction industry.[32]

Part II of this Article uses a hypothetical project to explore how shared-design responsibility affects the jurisprudence of design liability as well as how it colors the risk assessments and negotiating positions of distinct participants in the construction process. It suggests that the marketplace in which those participants operate provides a vibrant environment for a comprehensive, contract-based allocation of design liability. It also argues that the tort system is too unpredictable and uncontrollable to manage the important commercial relationships involved. Part III suggests some specific contract-based compromises that may emerge as participants seek common ground to allocate design liability in an industry that has evolved toward greater distribution of design activities. The simplest of those compromises may appear as new patterns in traditional, bilateral contracts to take into account the roles of those other than the contracting parties. The more comprehensive approaches, however, will require multi-party agreements among the interdependent participants; these may in turn facilitate new insurance products and other risk management techniques and may even bring fundamental changes to the dominant project delivery systems.

II. CONTRACT, TORT, AND SHARED-DESIGN PRACTICES

A. *Analyzing a Hypothetical Project in Light of Liability Theories and Multi-Party Interdependence*

Even as the design-build movement seems poised to overtake the dominance of the traditional project delivery system,[33] shared-design

32. *See infra* Part II.C.

33. Estimates of the proportion of all U.S. construction using the design-build system vary depending on the source consulted, the type of construction involved, and whether statistics are based on the number of projects or the value of projects. The Design-Build Institute of America estimates that in 2005, design-bid-build will account for approximately fifty percent of non-

practices threaten to eclipse the distinction between the traditional and design-build structures. The interdependent multi-party relationships that characterize this new variation on the design-build theme present some interesting questions about the allocation of design liability. First, as a matter of legal theory, is contract or tort the better construct for allocating design liability when multiple participants play interdependent design roles? Second, what theoretical and practical mischief may unfold when participants in shared-design projects fail to address the liability issues comprehensively through contracts? Finally, how and with what effect might lawyers who recognize the potential liability implications of the shared-design phenomenon restructure conventional contractual arrangements? The discussion that follows suggests that both legal scholars and legal counselors might profitably look to a comprehensive contract approach to bring order to this small corner of law and commerce.

B. *The Hypothetical Project*

A specific hypothetical will help focus the discussion on two examples of shared-design arrangements in a context that highlights several key design liability issues. Moreover, by presenting a stylized case study, this hypothetical project brings the discussion more quickly to that point at which legal liability relating to shared design may fall in the interstice between tort and contract. Although the project presented here is not a real one, its shared-design aspects derive from features of actual cases involving liability for defective specialty designs.[34]

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residential projects, design-build for approximately forty percent, and construction management for most of the balance. DESIGN-BUILD INSTITUTE OF AMERICA, NON-RESIDENTIAL DESIGN AND CONSTRUCTION IN THE UNITED STATES, http://www.dbia.org/ind_info/mkt_chrt.html (last visited Feb. 3, 2006). Another source reports that a 2003 survey showed the following percentages of projects used design-build: sixty-eight percent of power and communications industry projects; fifty-eight percent of sports and recreation facilities; fifty-seven percent of industrial plants, refineries, and warehouses; and fifty-six percent of medical facilities. Joe Gose, *Design-Build Goes Mainstream*, NAT'L REAL EST. INVESTOR, Apr. 1, 2003, http://www.nreionline.com/news/developer/real_estate_designbuild_goes_mainstream/. However one measures or reports the data, the number of design-build projects has been increasing for many years and has now reached the point that it challenges the dominance of the traditional system. *See* Schenck, *supra* note 29, at 1-1 to 1-2.

34. Two cases in particular suggested the idea of a prominent and highly specialized structural feature designed by a manufacturer rather than by the lead design team. *See* Bd. of Educ. v. URS Co., No. 64496, 1994 WL 520862, at *1 (Ohio Dist. Ct. App. Sept. 22, 1994), *aff'd in part and rev'd in part*, 648 N.E.2d 811 (Ohio 1995); Filmland Dev., Inc. v. Turner Constr. Co., Nos. B136497, B140556, 2002 WL 31693595, at *1 (Cal. Ct. App. Dec. 3, 2002) (unpublished and "noncitable" opinion). The first case involved a project to build a science classroom building and a planetarium dome. *URS Co.*, 1994 WL 502862, at *1. After extensive interviews and investigation, the school district's architect recommended The Dow Chemical Company to design and construct the dome because of the specialized nature of planetarium domes. *Id.* at *1-2. Both

Our hypothetical project presents a public-private collaboration that includes a commercial office tower and a county government center anchored around a spacious, glass-enclosed, multi-story atrium that serves as a common area between the two functional units. The atrium is a showcase feature that will provide a signature design for the project. The project owner is a real estate developer. The developer's design team will furnish a design concept for the entire project, and will also furnish the detailed drawings and specifications used for construction purposes, with two major exceptions. First, because of the technical demands of a large, glass-enclosed structure, the developer's design team has recommended that the manufacturer of the structural steel frame for the atrium should furnish the detailed engineering for the atrium. Second, the county, which will purchase and occupy the government center upon completion of the project, requires that a pre-selected security consultant design an integrated security system for the entire project. Except for these two limited specialty design components, the project delivery system is the traditional design-bid-build one in which the owner contracts separately with an architectural firm for the project design and with a general contractor for construction in accordance with that design.[35]

In keeping with common practices, the developer, as the owner of the project, retained an architectural firm to provide the project design. In accordance with the agreement between the architect and the developer, the architect selected a cadre of engineers to work as consultants to the architect to provide such matters as the civil, structural, electrical, and mechanical engineering details. This lead design team will first prepare preliminary drawings showing the design concept for the entire project, including the overall project configuration, the individual building locations and sizes, the atrium and its main features, and the appearance

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the lead architect and Dow Chemical were involved in presenting the planetarium plans for preliminary approval purposes, after which the school board entered into a construction contract for the entire project with a general contractor who subcontracted the detailed design and exterior of the dome to Dow Chemical. *Id.* at *1-3. The architect served as project manager for the entire project during construction. *Id.* at *3. The second case involved a project to build a U-shaped office building that featured a central glass atrium. *Filmland Dev.*, 2002 WL 31693595, at *1. The subcontractor arranged for the manufacturer to design and engineer a metal structure and to manufacture the parts for the frame, which was described as "a lattice of aluminum tubes joined at spherical metal nodes." *Id.* The building itself withstood the force of the 1994 Northridge earthquake, but the earthquake caused some of the frame's tubes to break or detach, possibly due either to the manufacturer's design defects or to the subcontractor's installation errors, or both. *Id.* at *2. Although these two cases offer facts suggestive of the atrium for the hypothetical project, neither serves as precedent for any analysis in this Article. The idea for a security system designed by a consultant selected by a government end user reflects the heightened importance of building security, which now accompanies every high profile project, especially those that will include government functions.

35. See 2 BRUNER & O'CONNOR, *supra* note 23, § 6:4.

of all other major architectural features. In addition to the atrium, these conceptual plans will show common areas for the use of all occupants of the project that include landscaping, access routes, walkways connecting each facility with the common atrium, and underground parking to be located below the atrium.

Several key participants will review and comment on the preliminary plans. This includes the developer, the county's contract administrator, and officials representing various planning, building code, and other departments of the local jurisdictions that will issue the required building permits and other governmental approvals required for the project. Following those reviews, the developer's design team will ultimately prepare a set of construction drawings to be issued to a single prime contractor, to be selected by the developer. The prime contractor's main role will be to retain and manage the team of subcontractors and suppliers who will execute the project design.

Different arrangements, however, apply to the detailed designs for the atrium and the security system. The architect's plans will identify the company that will provide the atrium steel frame. The prime contractor will issue a subcontract to that company to design, fabricate, and install the frame system in accordance with the architect's design concept. The construction documents issued by the developer's design team, which will be incorporated into the agreement between the developer and the prime contractor, will require the steel fabricator to submit a complete set of construction drawings, sealed by a licensed structural engineer retained by the fabricator, for all structural elements of the atrium.

Additionally, as part of its turnkey contract to sell the government center to the county upon completion, the developer has agreed to retain a specific security consultant identified by the county to develop a comprehensive security program that will include equipment and systems to monitor and control access and activity around the clock for the entire project. That consultant will submit the detailed design of the project security system for review and comment by the county, the owner's lead design team, and the prime contractor. On the basis of that design, the prime contractor will issue purchase orders and subcontracts to the security equipment manufacturers and installers designated by the consultant. As is the case with construction of the atrium, the prime contractor will coordinate the installation of the security system along with the balance of the project construction.

The project architect and its engineering consultants will review submissions showing the engineering designs for the atrium and for the security system before issuing the construction drawings, but do so solely for the purpose of confirming that they are consistent with the design intent and the conceptual documents prepared by the owner's design team. At that time, the developer will approve the final plans and deliver to the

prime contractor the complete set of construction drawings. The prime contractor will then submit to the owner, as the basis for the construction contract between the developer and the prime contractor, a construction proposal that establishes a definitive price and completion schedule for the total project. Construction will begin promptly after the prime contractor and the developer sign the construction contract.

The prime contractor will oversee construction of the entire project and will issue multiple subcontracts and purchase orders to delegate distinct construction activities to trade contractors, manufacturers, and suppliers. As is customary, the construction drawings will contemplate that the prime contractor will receive from subcontractors and suppliers certain final details for various components and systems in the form of shop drawings, material samples, and other submittals. The prime contractor will forward these details to the owner and the architect in accordance with the construction administration procedures established by the developer-prime contractor and developer-architect agreements. The architect and its design team will continue to provide services to the developer during construction for such purposes as responding to inquiries for clarifications from the prime contractor and its construction team, preparing change orders, reviewing the shop drawings and other submittals, reviewing the progress of construction, approving progress payments to the prime contractor, and issuing certificates of substantial completion and final completion.

Several contractual features of this arrangement have special significance for the purposes of this Article. Although the project delivery system resembles the traditional one that differentiates sharply between design and construction responsibilities, two critically important design functions have been excluded from the developer-architect relationship and injected into other relationships. The security system design will be provided by a consultant who has been selected by the county, but who will be retained under a separate contract entered into by the developer. In an era of terrorism, this process presents important public safety implications for a prominent project that serves both government and private functions. At the same time, a critical component of the project's engineering has also been excluded from the developer-architect relationship, and it has been incorporated into the prime contractor's responsibility in the form of a special design-build subcontract. With the exception of the atrium, the prime contractor does not otherwise serve as a design-builder for this project.

The participants, therefore, find themselves operating under a hybrid project delivery system in which one specialty designer will be retained directly by the developer outside of the architect's lead design team and another specialty designer will be a subcontractor to the prime contractor who is otherwise outside of the chain of design responsibility. The specialty designer for the atrium, although initially identified by the

developer's architect, will have a contract with the prime contractor, who presumably has no expertise in structural steel or atrium design. The specialty designer for the security system, although selected by the county, has a contract with the developer, who presumably has no expertise in security system design. Neither of the two specialty designers has a contract with the lead architect. Finally, although neither specialty designer is part of the architect's design team, the architect and other members of its team will play important roles in establishing the criteria and requirements for the specialty designs as well as in the process by which the specialty designs will be coordinated and integrated with the overall project design. In short, with the introduction of two seemingly isolated variations on a conventional theme, this situation creates a unique web of legal and commercial relationships. It presents challenges that involve contractual and non-contractual relations among the participants, as well as special considerations important to each participant's lawyers[36] and insurers and to any sureties who may be involved.

C. *Legal Theory in a Practical Industry*

The fundamental theoretical issue is whether to use tort or contract principles to address design liability questions. Tort law and contract law represent overlapping legal systems for distributing responsibility for loss and damage produced by human endeavors.[37] In American law today, the more expansive and policy driven of these two systems is tort law, by which courts, as a matter of public policy, impose duties on actors to avoid causing injury to others.[38] Contract law, by contrast, provides remedies under relatively limited circumstances for injury caused by broken promises.[39] In an essential sense, one might say that contract is the branch of the common law that concerns legally enforceable relationships defined primarily by the assent of the parties, especially commercial agreements,

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36. Due to the popularity of construction industry form contracts, it is difficult to state any general rule about the role that lawyers may play in drafting and negotiating contracts for a project such as the hypothetical situation presents. Given the size and complexity of the hypothetical project, however, it is likely that the key participants would seek the advice of legal counsel even though they may base their negotiations on common industry contract forms.

37. *See* 1 E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 1.7 (2d ed. 1998). Professor Gilmore delightfully explored the overlap in his famous hyperbole. *See* GRANT GILMORE, THE DEATH OF CONTRACT 87-90 (1974).

38. *See* GILMORE, *supra* note 37, at 87, 90; G. EDWARD WHITE, TORT LAW IN AMERICA: 139-79 (expanded ed. 2003).

39. "A contract is a promise or a set of promises for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty." RESTATEMENT (SECOND) OF CONTRACTS § 1 (1981). *See generally* FOUNDATIONS OF CONTRACT LAW 3-39 (Richard Craswell & Alan Schwartz eds., 1994) (discussing the normative underpinnings of contract law).

while tort is the branch of the common law that concerns most other civil relationships not governed by other specific branches of the law.[40]

A tort approach has obvious attraction when design activities create the unreasonable risk of bodily or personal injury to one who is not a direct party to the design services agreement involved, at least if the victim cannot claim third-party beneficiary status.[41] For example, an engineer may be liable in tort when a defectively designed store sign falls on a store customer during a windstorm.[42] Similarly, an engineer who negligently recommends acceptance of an improperly designed intersection may be liable to a person injured in an accident at that intersection.[43] Cases of this kind, however, have little relevance to the theoretical competition between tort and contract theory at issue here because no option for a contract remedy can exist absent a relevant contract. Tort is the only available route.

A contract approach would seem more natural than a tort one, however, when design activity causes damage to commercial participants in the construction process.[44] To begin with, virtually every business that becomes involved with the modern construction industry does so under the auspices of some sort of agreement. Furthermore, one could scarcely find a human activity that is more commercial than building design and construction. The industry represents an enormous segment of all

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40. Although appealing scholarly criticisms challenge many of the possible distinctions between contract and tort, most discussions at least concede to contract the more conventional issues concerning written commercial bargains between parties having equal bargaining position. *See, e.g.*, Daniel A. Farber & John H. Matheson, *Beyond Promissory Estoppel: Contract Law and the "Invisible Handshake,"* 52 U. CHI. L. REV. 903, 905-06, 945 (1985); Peter Linzer, *Uncontracts: Context, Contorts and the Relational Approach*, 1988 ANN. SURV. AM. L. 139, *reprinted in* A CONTRACTS ANTHOLOGY 82-91 (Peter Linzer ed., 1989). Professor Farnsworth distinguishes contract law and tort law on the basis that contract law "concerns planning for the future" and tort law "imposes liability to remedy wrongful violations of recognized interests." 1 FARNSWORTH, *supra* note 37, at 25.

41. *See, e.g.*, Trs. of Columbia Univ. v. Gwathmey Siegel & Assocs. Architects, 601 N.Y.S.2d 116, 118 (App. Div. 1993) (finding that a design-build contractor owed a duty of care to the owner and the public for safe design and construction of a college dormitory because a project of that nature "is so affected with the public interest that the failure to perform competently can have catastrophic consequences"). The courts have not been eager to imply a third-party beneficiary motive into contracts for design services. *See, e.g.*, Peter Kiewit Sons' Co. v. Iowa S. Utils. Co., 355 F. Supp. 376, 392-93 (S.D. Iowa 1973).

42. *See, e.g.*, Laukkanen v. Jewel Tea Co., 222 N.E.2d 584, 588 (Ill. App. Ct. 1966) (finding that the engineer "defendants owed a duty . . . to those members of the general public who can be reasonably anticipated to be present in the structure they designed when negligence in design is a causal factor in injuries sustained through collapse of the building").

43. *See* Robert & Co. Assocs. v. Tigner, 351 S.E.2d 82, 84, 86-87 (Ga. Ct. App. 1986).

44. This Article does not address liability for personal injuries suffered by construction workers.

economic activity,[45] and those who participate in it must manage enormous financial and economic risks.[46] Residential construction aside,[47] a large proportion of those involved are sophisticated business entities, and even those who are relatively unsophisticated recognize that design and construction activities involve important legal relationships that require deliberate risk allocation.[48]

It would be difficult to find an industry that seems more attuned to liability risks than is the construction industry. The considerable risks that building construction entails attract the constant concern of those who develop,[49] finance,[50] design,[51] and build[52] construction projects. The industry has developed highly structured methods for managing those risks.[53] Those methods include cost estimating and accounting procedures,[54] scheduling tools,[55] safety programs,[56] well-defined

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45. *See* Thomas J. Stipanowich, *Reconstructing Construction Law: Reality and Reform in a Transactional System*, 1998 WIS. L. REV. 463, 465.

46. *See* 2 BRUNER & O'CONNOR, *supra* note 23, §§ 7:179-:230.55.

47. Consumer protection laws and other special considerations may properly remove residential construction from the exclusive realm of contract analysis. *See* Stipanowich, *supra* note 45, at 502-05. *See generally* Michael D. Turner, *Paradigms, Pigeonholes, and Precedent: Reflections on Regulatory Control of Residential Construction*, 23 WHITTIER L. REV. 3 (2001) (discussing the "battle between competing economic self-interests . . . and selection of building codes regulating residential construction standards").

48. A recent issue of a popular journal for construction lawyers is dedicated to insurance coverage developments affecting the construction industry. CONSTRUCTION LAW., Summer 2005. Among other things, this series of practical articles demonstrates that even small contractors and specialty firms rely extensively on highly developed risk management techniques. *See, e.g.*, Jack P. Gibson & W. Jeffrey Woodward, *The 2004 ISO Additional Insured Endorsement Revisions*, CONSTRUCTION LAW., Summer 2005, at 8.

49. *See* Kenneth M. Cushman & Joyce K. Hackenbrach, *Construction Project Risk Allocation: The Owner's Perspective*, 480 PLI/REAL 7, 9-10, 36 (2002).

50. *See* Stanley P. Sklar, *A Short Guide to Construction Issues for the Construction Lender*, 485 PLI/REAL 441, 445-59 (2002).

51. *See* Robert L. Meyers, III et al., *Risk Allocation from the Designer's Perspective*, 480 PLI/REAL 147 (2002).

52. *See* Jesse B. Grove, III, *Risk Allocation from the Contractor's Perspective: Philosophies of Risk Allocation*, 467 PLI/REAL 41 (2001).

53. *See* 2 BRUNER & O'CONNOR, *supra* note 23, §§ 7:1-:18.

54. *See* MATTHEW BENDER & CO., FINANCIAL MANAGEMENT AND ACCOUNTING FOR THE CONSTRUCTION INDUSTRY § 16.01 (2005).

55. *See* Thomas P. Carnery, Inc. v. Sch. Dist. of Phila., 633 F. Supp. 1273, 1281 (E.D. Pa. 1986) (involving use of critical path scheduling); 5 BRUNER & O'CONNOR, *supra* note 23, §§ 15:1-:10.

56. *See* Twin City Fire Ins. Co. v. Amerisure Ins. Co., No. Civ.A.03-0264-L, 2005 WL 2284913, at *4 (S.D. Ala. Sep. 19, 2005); Mohegan Tribal Gaming Auth. v. Kohn Pedersen Fox Assocs., No. X04CV030127351S, 2003 WL 23177993, at *4 (Conn. Super. Ct. Dec. 23, 2003); Indep. Ins. Agents v. Turnpike Auth., 876 P.2d 675, 676 (Okla. 1994); 2 BRUNER & O'CONNOR, *supra* note 23, § 7:60.

professions and specialty trades,[57] and neatly tailored insurance and surety products.[58] All this might logically dictate that both the freedom and the sanctity of contract should reign throughout the construction industry. For these reasons, we might expect that when commercial actors engage in building design and construction the courts should look almost exclusively to the terms of the contracts the participants negotiate to determine where losses should rest.

It seems surprising, therefore, that tort law rather than contract law dominates as the theory of liability that governs damage and injury resulting from building design activity. To observe this dominance of tort law, one need only review scholarly discussions and practical treatises on the liability of design professions, which bulge with tort principles and cases but barely take note of the potential application of contract.[59]

The dominance of tort law over contract law in matters of building design began in the nineteenth century with the development of architectural and engineering malpractice law.[60] In the early cases, the courts effortlessly expanded principles of tort liability into the purely commercial relationships between participants in the construction industry.[61] In effect, the courts long ago opted for a professional malpractice analysis to redefine the contractual relationship created when a client hires a design professional. And they did so with little regard for contract theory. True, the courts routinely announced adherence to the doctrinal line that an action in tort does not lie for breach of contract.[62] But then they unceremoniously declared a duty of professional care owing from designer to client that is both independent from the contract and yet based on it.[63] This duty, the cases reason, arises from the "special

57. *See* JUSTIN SWEET, LEGAL ASPECTS OF ARCHITECTURE, ENGINEERING AND THE CONSTRUCTION PROCESS § 28.01 (6th ed. 2000).

58. *See* 4 BRUNER & O'CONNOR, *supra* note 23, §§ 11.1 & 12.1; *see also* Patrick J. O'Connor, *Insurance Products for the Construction Industry*, CONSTRUCTION BRIEFINGS, Oct. 2001, at 10 (discussing insurance issues that confront those involved in the construction industry).

59. *See, e.g.*, Constance Frisby Fain, *Architect and Engineer Liability*, 35 WASHBURN L.J. 32, 34 (1995); Steven G.M. Stein, *Architect's Duties and Responsibilities*, *in* CONSTRUCTION LAW, *supra* note 21, § 5; William David Flatt, Note, *The Expanding Liability of Design Professionals*, 20 MEM. ST. U. L. REV. 611, 615-19 (1990); *see also* Note, *Architectural Malpractice: A Contract-Based Approach*, 92 HARV. L. REV. 1075, 1075-83 (1979).

60. *See* Coombs v. Beede, 36 A. 104, 104-05 (Me. 1896).

61. *See, e.g.*, City of Eveleth v. Ruble, 225 N.W.2d 521, 524 (Minn. 1974) (citing Cowles v. City of Minneapolis, 151 N.W. 184 (Minn. 1915)).

62. *See, e.g.*, Tommy L. Griffin Plumbing & Heating Co. v. Jordan, Jones & Goulding, Inc., 463 S.E.2d 85, 88 (S.C. 1995).

63. *See id.* The underlying legal analysis involved has deep roots. *See* Rich v. N.Y. Cent. & Hudson River R.R. Co., 87 N.Y. 382, 390 (1882) ("In such cases the tort is dependent upon, while at the same time independent of the contract; for if the latter imposes a legal duty upon a person, the neglect of that duty may constitute a tort founded upon a contract.").

relationship" that the contract creates.[64] In that manner, the courts conjured a tort duty from a contractual relationship.[65]

It is not the result of the malpractice cases that is objectionable; rather, it is that, by electing a tort approach, courts disregard the consensual nature of the parties' relationship even though a logical and coherent contract approach would produce the same result. At least with the benefit of contract principles now well-established, who could quarrel with an interpretation of a routine contract for professional design services that, in the absence of express terms to the contrary, implies a term that the design professional must perform all professional services in accordance with the prevailing standards of that profession?[66] Could the contracting parties have contemplated anything less without saying so explicitly? The situation presents an ideal case for using common sense to discern what a contract means.[67]

In short, when design activities damage the design professional's client, the existence of the agreement for the design services should normally take the relationship out of the purview of tort law. But even one who accepts this view may question the significance of a theoretical preference for a contract analysis when a client sues over a design error. In such a case the court should find a sufficient basis in either contract or tort to impose on the design professional a duty to the client to adhere to the professional standard of care.[68] It makes no practical difference whether the duty arises

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64. *See, e.g., Griffin Plumbing & Heating Co.*, 463 S.E.2d at 88.

65. *See id.* at 89.

66. Under established contract principles, courts may supply essential terms by imposing obligations of good faith and fair dealing upon the parties that the contracting parties omit. RESTATEMENT (SECOND) OF CONTRACTS § 205 (1981). Even when presented with an integrated agreement, courts may admit evidence of a consistent additional term agreed to but not expressed in the writing if the term is one that, under the circumstances, might naturally be omitted from the writing. *Id.* § 216.

67. For a particularly apt analogy, see Gallagher v. Upper Darby Twp., 539 A.2d 463, 473 (Pa. Commw. Ct. 1988). The court held that the jury could infer from the evidence that the defendant plumber was contractually obligated to find and fix the source of the plaintiff's sewer problem and not merely to install the new sewer line as specified by the express terms of the written contract. *Id.* at 474.

68. Even if the design services contract includes exculpatory provisions, public policy considerations governing the effect of those provisions may bind an architect or engineer to a professional standard of care. Most jurisdictions enforce exculpatory clauses in contracts that excuse ordinary negligence. *See, e.g.*, Anunziatta v. Orkin Exterminating Co., 180 F. Supp. 2d 353, 357, 363 (N.D.N.Y. 2001) (enforcing a provision in a pest extermination contract that limited the homeowner's remedy to retreatment of the home); Fresh Cut, Inc. v. Fazli, 630 N.E.2d 575, 580 (Ind. Ct. App. 1994) (upholding an exculpatory clause so long as it did not outweigh the state's public policy of generally favoring the freedom to contract). Exculpatory clauses that purport to excuse violations of safety regulations or gross negligence or to relieve a professional from liability for malpractice, however, may be limited by public policy considerations. *See* Emory Univ. v. Porubiansky, 282 S.E.2d 903, 905 (Ga. 1981) (holding ineffective a contractual disclaimer

as a matter of private contract based on express[69] or implied[70] terms of the agreement for design services, or is judicially imposed under a tort analysis[71] based on public policy. Thus, in these situations, the substantive question of whether to impose legal liability or not comes out the same whether we apply tort law or contract law.[72] As a result, perhaps the early malpractice cases applying a tort standard to performance under a design services contract may be understood on a purely pragmatic basis; at a time when formalism exerted much power over contract, the concept of duty in tort provided a convenient and flexible option for courts to reach a logical result.[73]

This last observation may provide an explanation, if not a justification, for using tort principles to allocate design risks between contracting parties. That is, up to some point in the development of the jurisprudence of design liability, one may argue that the interesting theoretical questions involved have no practical significance. Perhaps the tort system has provided an adequate framework for allocating the most common risks of design liability with results that do not differ significantly from what we might expect from a contract approach. Whether the design activity causes physical injury or some other type of damage to the client, tort and contract analysis often will lead to the same substantive liability decision. In other words, the tort concepts of duty and the professional standard of care often conveniently approximate the implicit commercial expectations of the contracting parties.

The significant differences between using tort or contract principles to determine design liability appear in sharper relief when design activities cause economic damage to someone other than the design professional's client. In those situations, a tort law analysis might impose a duty of

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purporting to relieve a dentist from liability for failure to exercise reasonable care); Hargis v. Baize, 168 S.W.3d 36, 40, 47 (Ky. 2005) (safety regulations); Colnaghi, U.S.A., Ltd. v. Jewelers Prot. Servs., Ltd., 611 N.E.2d 282, 283-84 (N.Y. 1993) (grossly negligent conduct). *See generally* 6 BRUNER & O'CONNOR, *supra* note 23, § 19:52.62. In any event, courts developed the controlling principles of design professional malpractice many years ago in cases uninfluenced by contractual exculpatory clauses. *See supra* notes 60-65 and accompanying text.

69. *See* Follansbee Bros. Co. v. Garrett-Cromwell Eng'g Co., 48 Pa. Super. 183 (Super. Ct. 1911).

70. *See* Audlane Lumber & Builders Supply, Inc. v. D. E. Britt Assocs., 168 So. 2d 333, 335 (Fla. 2d DCA 1964).

71. *See, e.g.*, Minn. Forest Prods. Inc. v. Ligna Mach., Inc., 17 F. Supp. 2d 892, 915 (D. Minn. 1998).

72. Procedural and remedial considerations are different matters. *See, e.g.*, 3 BRUNER & O'CONNOR, *supra* note 23, § 9:5 (discussing, among other things, how characterizing a warranty claim as based in contract or tort may affect such matters as the measure of damages, available remedies, and the applicable statute of limitations).

73. *See* Eric A. Posner, *The Decline of Formality in Contract Law*, *in* THE FALL AND RISE OF FREEDOM OF CONTRACT 61, 63-66 (F.H. Buckley ed., 1999).

professional care, but the ultimate remedy for the damaged party may turn on the court's decision whether or not to apply the economic loss rule, which frequently bars recovery in tort for economic loss when the claim does not also involve personal injury or property damage.[74] Should the owner's engineer be liable to the owner's contractor for damages caused by negligent design and supervision?[75] What damages may a project owner recover from the builder's equipment supplier and the supplier's installation subcontractor resulting from design defects in the equipment?[76] May a general contractor recover damages from the owner's engineer because the engineer provided inaccurate documents upon which the contractor relied for purposes of preparing its bid?[77] The list of

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74. *See generally* LESLIE O'NEAL-COBLE ET AL., CONSTRUCTION DAMAGES AND REMEDIES 330-60 (W. Alexander Moseley ed., 2004) (exploring the economic loss rule as it applies to defective construction products, the work of contractors, professional services, and negligent misrepresentation); John J. Laubmeier, *Demystifying Wisconsin's Economic Loss Doctrine*, 2005 WIS. L. REV. 225 (discussing the economic loss doctrine in Wisconsin); Steven B. Lesser, *Economic Loss Doctrine and Its Impact Upon Construction Claims*, CONSTRUCTION LAW., Aug. 1994, at 21 (exploring the scope and application of the economic loss doctrine in the construction industry); Anthony L. Meagher & Michael P. O'Day, *Who is Going to Pay for My Impact? A Contractor's Ability to Sue Third Parties for Purely Economic Loss*, CONSTRUCTION LAW., Fall 2005, at 27 (discussing the economic loss rule "as applied to contractor claims against third-party professionals"); Patricia H. Thompson & Christine Dean, *Continued Erosion of the Economic Loss Rule in Construction Litigation By and Against Owners*, CONSTRUCTION LAW., Fall 2005, at 36 (addressing "recent trends in judicial treatment of the [economic loss rule] as it pertains to noncontractual claims for economic damages by and against owners") (footnote omitted); Emily M. Usow, *Redefining the Professional Service Contract: The Evolution and Deconstruction of Florida's Economic Loss Rule*, 8 U. MIAMI BUS. L. REV. 1 (1999) (considering the evolution of the economic loss rule in Florida and how "the common law of negligence has been altered since the inception of the economic loss rule"); Gary Ashman, Note, *The Long and Winding Road of Economic Loss Doctrine in* Calloway v. City of Reno, 3 NEV. L.J. 167 (2002) (examining "the Nevada Supreme Court's treatment of the economic loss doctrine in construction defect cases"); Jody Bedenbaugh, Comment, *Liability of Design Professionals for Purely Economic Loss in South Carolina*, 53 S.C. L. REV. 701 (2002) (addressing "the liability of design professionals to third parties with whom they are not in privity of contract"); Michael T. Terwilliger, Note, *Economic Loss in the Construction Context: Should Architects be Liable For the Commercial Expectations of Contractors?*, 31 VAL. U. L. REV. 257 (1996) (arguing for the avoidance of recovery of economic loss by contractors from architects).

75. *See, e.g.*, Tommy L. Griffin Plumbing & Heating Co. v. Jordan, Jones & Goulding, Inc., 463 S.E.2d 85, 88-89 (S.C. 1995) (finding a contractor's claim sufficient to withstand an engineer's motion for summary judgment).

76. *Cf.* Commercial Distribution Ctr., Inc. v. St. Regis Paper Co., 689 S.W.2d 664, 666, 670 (Mo. Ct. App. 1985) (finding in a case involving defective structural supports for a warehouse refrigeration system designed by a contractor's supplier and installed by a company retained by the supplier, that the evidence was sufficient to support strict liability and negligence claims by a subsequent purchaser of the warehouse against the supplier and installation subcontractor, but not against the general contractor, for physical damage to merchandise stored at the facility when the system failed after completion of construction).

77. *See* IT Corp. v. Ecology & Envtl. Eng'g, P.C., 275 A.D.2d 958, 960 (N.Y. App. Div.

possibilities goes on, as does the debate among tort scholars and commentators.[78] These situations are inevitably troubling when analyzed in light of tort policy, and they question whether our jurisprudence of construction design liability is mistakenly anchored in tort.

Shared-design practices provide an opportunity to reopen the question whether it is better to rely primarily on the construct of tort or contract to analyze design liability questions. Drawing on long-standing scholarly inquiries into the essence as well as the relevance of contract, one might identify several reasons to prefer tort over contract for allocating shared-design liability. For example, the actual experience with shared design in the construction industry may suggest that many participants in the design process, like many of their business counterparts in general,[79] will think it unproductive to depend extensively on contracts to order the unruly and unpredictable risks involved. Moreover, because contracts often allocate the risks that may arise from the contractual relationship only partially or imperfectly, tort principles of liability frequently will remain applicable to disputes between the contracting parties.[80] Additionally, if one concedes that participants in a modern construction project often must rely extensively on one another to act reasonably, then perhaps tort is the most feasible construct for addressing design liability.[81] Finally, are classical distinctions between contract and tort merely part of the game that lawyers and legal scholars play behind a façade of ordered doctrine?[82] In light of these ruminations, it may be predictable that disputes attributable to the special relationships that arise from shared-design contracts will be "reabsorbed into the mainstream of 'tort.'"[83]

2000) (denying recovery for alleged negligent misrepresentation because the parties were not in privity of contract).

78. *See* sources cited *supra* note 74.

79. *See* Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55, 58 (1963).

80. For example, the theory of negligent representation often permits a contracting party to assert a viable tort claim against the other contracting party based on extra-contractual allegations relating to the subject matter of the contract. *See, e.g.*, Vicon, Inc. v. CMI Corp., 657 F.2d 768, 775 (5th Cir. 1981); Cocchiola Paving, Inc. v. Peterbilt of S. Conn., No. CV010168579S, 2003 WL 1227557, at *6 (Conn. Super. Ct. 2003); Maxey v. Quintana, 499 P.2d 356, 359-60 (N.M. Ct. App. 1972).

81. For a discussion of using tort liability to enforce contractual obligations, see Randy E. Barnett, *Contract Scholarship and the Reemergence of Legal Philosophy*, 97 HARV. L. REV. 1223, 1241-45 (1984) (reviewing E. ALLAN FARNSWORTH, CONTRACTS (1982)).

82. *See* Stewart Macaulay, *An Empirical View of Contract*, 1985 WIS. L. REV. 465, 477.

83. GILMORE, *supra* note 37, at 87. By notoriously investigating the reported death of contract more than a generation ago, Professor Grant Gilmore helped to assure that legal scholars would continue a lively debate on the role and relevance of contract that abides to this day. *See generally* A CONTRACTS ANTHOLOGY (Peter Linzer ed., 1989) (providing a selection of readings on contract law); THE FALL AND RISE OF FREEDOM OF CONTRACT (F.H. Buckley ed., 1999)

This opening reflection on the proper boundaries between tort and contract does not presume to contribute to the literature on the relevance and future of contract in contemporary jurisprudence. It has, instead, a far more modest goal. It asks only whether a contract approach to liability for shared design is a viable alternative to the tort approach and, if so, it wonders how such an approach might differ from the contracting conventions current in the industry. These are not idle questions; we can confidently predict that those who invest their fortunes, careers, and reputations in complex construction projects will continue to document their commercial expectations in formal, detailed, written agreements, even as they continue to embrace shared-design practices, without always comprehensively addressing the liability implications. Yet, if the industry as a whole does not significantly alter contracting conventions to account for the peculiar relationships that shared design creates, experience shows that courts will eventually invoke tort principles to identify and allocate risks that the parties were content to ignore.[84]

Although the construction industry recognizes that shared-design practices complicate questions of design liability,[85] it has not developed widely accepted contracting customs that address those complications in a legally significant way. A popular industry form contract provides an anecdotal example of this failure. The American Institute of Architects promulgates a leading industry contract form used for projects that follow the traditional project delivery system in which the owner contracts separately for design and for construction.[86] The latest revision of that document added an express provision dealing with the shared-design process, but it does little more than clarify that the overall project design plans prepared by the owner's architect may instruct that some design will be provided by the general contractor and its subcontractors and suppliers.[87] The provision cryptically states that the owner and the owner's architect may rely on the design provided by the contractor, yet the owner and its architect must specify "all performance and design criteria that such services must satisfy" and the owner's architect "will review, approve or take other appropriate action on submittals" but only for the vaguely "limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents."[88] The provision

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(exploring "the intellectual revival of freedom of contract").

84. *See, e.g.*, City of Eveleth v. Ruble, 225 N.W.2d 521, 524 (Minn. 1974).

85. *See, e.g.*, Lunch, *supra* note 30, at 29; Potter, *supra* note 30, at 27; *supra* note 30, at 110.

86. American Institute of Architects, General Conditions of the Contract for Construction, AIA Document A201-1997, *reprinted in* JUSTIN SWEET, *supra* note 57, app.C, at C-2 (6th ed. 2000).

87. *Id.* § 3.12.10.

88. *Id.* For a more complete critique of the AIA provision, see Circo, *supra* note 22, at 212-15.

woefully fails to recognize, let alone allocate, the numerous liability and risk management issues that Part II.D of this Article discusses.[89]

As a matter of understanding social behavior, one must wonder why those who engage in complex commercial relationships involving the high risk of property and economic damage would not uniformly prefer to work out these liability issues more fully themselves than to await the gavel. More to the point, a practical lawyer counseling a client involved in a shared-design project must wonder whether a comprehensive contract approach could provide the best solution for everyone involved.

To illustrate, let us now consider directly how the law should allocate liability for damage that may result from the shared-design processes involved in our hypothetical. The jurisprudential preference to view design liability as a branch of professional malpractice predicts that if something goes awry in the design of the project's atrium or its security system, courts will be prepared to distribute liability among several participants based on concepts of duty and the professional standard of care. The hypothetical focuses attention on the prospect of property damage or economic loss, and the balance of this Article will consider only those possibilities. This Article does not consider such matters as who should be liable if design problems cause injury to a worker, a visitor to the construction site, a passerby, or an occupant or user of the completed project.[90]

Even in this relatively simple hypothetical, multiple, complex, and interdependent relationships among those who participate in the design process seem certain to produce commercial risk allocation issues too intricate for blanket tort-law solutions. For most possible problems that design defects might cause, every relationship could produce multiple theories to support claims, cross-claims, counterclaims, and defenses. Consider, for example, how the project owner, the county, the project architect, several of its engineering consultants, the prime contractor, the security consultant, the atrium subcontractor, and the subcontractor's engineering consultant all might be involved in design activities that lead to costly delays for one or more other participants. Certainly every design professional who plays any role in the process should know that several other participants in the process will reasonably rely on the expectation that each professional service will be performed in accordance with the professional standard of care. That being so, which of several design

89. This is not to say that experienced construction lawyers routinely ignore the issues that shared design presents. Rather, the point is that the current version of a contract form that has wide acceptance in the industry largely overlooks the complications involved.

90. As already indicated, should these processes cause bodily or personal injury to any person, resort to the tort system seems both unavoidable and desirable. *See supra* notes 41-43 and accompanying text.

professionals involved should have a duty to judge the propriety of the division of design responsibility in the first place? Who should review the services, advice, conclusions, recommendations, comments, and omissions of whom? What standard of care should apply to non-professionals involved in design activities?[91] Who should coordinate one design with another?[92] Who should integrate all designs into the project as a whole?[93]

All these questions and more become material for further consideration in Part II.D. Whenever the parties to this complex process have the foresight to allocate liability under these circumstances, the jurisprudence of design liability should welcome their efforts. Indeed, the analysis that follows suggests that considerations of judicial economy, commercial reliance, and economic welfare all point in favor of a contract approach. Perhaps this solution may even appeal to those who would insist that tort law must be held in reserve to allocate liability when the parties fail to anticipate specific circumstances. So it seems not only functionally practical but also theoretically compelling to ask how the participants in a shared-design project who are mindful of the legal duties that their special relationships may impose on them might develop a suitable contract regime to govern those duties.

D. *Interdependent Commercial Perspectives*

Our hypothetical project exemplifies the increasing use of trade contractors, specialized consultants, and manufacturers to provide specialty designs. Properly understood—that is, in light of considerations already explored—these circumstances not only invite the project participants and their lawyers to re-evaluate fundamental construction contracting conventions, but they logically require that they do so. To demonstrate why, this subsection analyzes the shared-design process from the commercial perspectives of the major participants. What follows merely projects one of several possible ways in which each participant might analyze the design risks that the hypothetical project presents.

A transcendent theme emerges from this exercise: Shared design

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91. *See* Gardiner Park Dev., LLC v. Matherly Land Surveying, Inc., Nos. 2003-CA-002017-MR, 2003-CA-002048-MR, 2005 WL 991066, at *2-3, *4, *9-10 (Ky. Ct. App. Apr. 29, 2005) (involving the question of whether to apply the statute of limitations for professional malpractice to a claim against a land surveyor).

92. *See* City of Portsmouth v. Buro Happold Consulting Eng'rs, P.C., No. Civ.A.2:05CV341, 2005 WL 2009281, at *1 (E.D. Va. Aug. 19, 2005) (involving the failure of an architect to coordinate with consulting engineers regarding the design of certain structural elements).

93. *See* Travelers Cas. & Sur. Co. v. Dormitory Auth., No. 04 Civ.5101(HB), 2005 WL 1177715, at *7 (S.D.N.Y. May 19, 2005) (holding that a contract obligated the architect to integrate into the design documents the work of the contractor and a subcontractor); Nicholson & Loup, Inc. v. Carl E. Woodward, Inc., 596 So. 2d 374, 388-89 (La. Ct. App. 1992).

creates a series of highly interdependent commercial relationships, and it does so whether or not the parties address those relationships adequately in their contracts. In the process of developing that theme, this subsection also implicitly asks whose interests the law will promote if the relevant contracts provide incomplete answers. Each separate sketch in this subsection discusses some of the fundamental interests and objectives that may influence the negotiating positions and risk allocation strategies of a specific participant. These considerations include economic, risk management, and other fundamental business concerns that ultimately give commercial substance to issues of legal liability.

As the discussion progressively considers the unique perspectives of each participant, we begin to see why both theoretical and practical considerations should eventually motivate these interdependent participants to adapt customary contract arrangements to reflect the new reality of shared-design responsibility.[94] The ultimate judgment here is that if those involved with shared-design processes fail to craft a coherent contract approach to allocate and manage the risk of design liability among all of the interdependent roles, the judiciary will certainly impose on them a less efficacious risk allocation system. The judicial approach may be guided either by the merciless application of the notion that contract sanctity prevents reading terms into commercial contracts or, what seems more likely, by an aggressive application of tort principles to the multi-party, interdependent relationships of a shared-design project.

This section deliberately treats legal questions as secondary because it views specialty design primarily from commercial perspectives. This is similar to the way that participants in the construction industry analyze risk. They first seek to identify and evaluate risks within the context of business objectives, and then to control or manage them in commercially practical ways. Only after they arrive, at least tentatively, at suitable business arrangements do they give to their lawyers the task of fitting those arrangements into a legal framework. This is the rightful realm of contract, and it is the reason that lawyers who draft complex commercial contracts need to draw on their grasp of legal theory as well as their knowledge of their clients' objectives.

Because the project owner normally initiates a project and makes the ultimate decision whether and how to proceed, the discussion that follows begins with an extended review of an owner's perspective, and then it considers the perspectives of other participants in the process as they, in a sense, react to the owner's objectives. This is not to say that these other participants play only a passive role in the process. Rather, this approach

94. One could argue, however, that the construction industry does not create a commercially reasonable environment for all parties to protect themselves efficiently or fairly through contract negotiations. *See* Circo, *supra* note 22, at 232.

simply recognizes how projects occur in the ordinary course of things. Design professionals, builders, and others involved in the construction process must evaluate the business opportunities and risks they face in light of the nature of the project the owner wishes to build and the project delivery system that the owner elects. To be sure, the owner's decisions may rely extensively on input from design professionals, contractors, manufacturers, suppliers, trade specialists, insurance advisors, and others. In the end, however, it is the owner's business needs that define the project, and it is the owner's decision to commit capital to the endeavor that converts a project from a mere notion existing on paper to a structure rising from the ground.

1. Private Developer

A commercial owner builds a project to serve a business purpose. For an owner that is a real estate developer (as in the hypothetical), the underlying objective is either to sell the completed project for a profit or to own and operate it as a successful economic investment. This means that projected economic returns must justify the costs of construction. Thus, the developer must establish a reliable budget and must maintain adequate controls over that budget. The developer's interests also focus attention on the project completion schedule. Delays in completion contribute significantly to cost overruns, and they also threaten to delay or deny project revenues. Thus, cost and schedule always heavily influence a developer's perspective on every aspect of the construction process.

The third essential consideration for every owner is sometimes thought of as quality. More accurately, this third essential objective is that the completed construction must be what the developer proposed to build. This concept encompasses the nature, appearance, function, performance, and quality of the completed project. For these purposes, the term "utility" may better capture the concept. For some owners, such as residential purchasers and even some commercial owner-occupants, aesthetic concerns dominate this third component. But for commercial developers, aesthetics is only one aspect of it. To produce revenue as planned, the completed construction must serve its intended functions, and it must perform as planned. It must support the specific operations proposed for it, it must attract and satisfy the desired end-users or purchasers, and it must meet maintenance and durability expectations.

These three components—budget, schedule, and quality or utility—figure into nearly every decision the developer makes concerning the construction process.[95] A decision that serves one of these objectives, however, may detract from one or both of the others. For example, a

95. *See* Stover, *supra* note 21, § 3.01.

contractual arrangement that assures timely completion may drive up costs, force quality concessions, or both.

For much of the past century, commercial developers in the United States have often relied on the traditional design-bid-build delivery system to balance budget, schedule, and utility considerations.[96] Under this traditional approach, although the builder agrees to deliver to the owner a finished project that includes all elements of the comprehensive plans and that meets all of the design requirements, the builder will probably provide only a small portion of the construction and other required services directly through its own employees and facilities.[97] The builder will subcontract the balance of the work to specialized trade firms, suppliers, and manufacturers.

Although the design-bid-build system is the traditional method for commercial construction, its well known limitations have produced a steady rise in the popularity of design-build construction, which combines the design and construction responsibilities for an entire project.[98] Proponents of design-build argue that it is often a more efficient process, that it eliminates tension between designer and builder, and that it provides the owner with a single point of responsibility for the entire project.[99] Not only can it produce direct cost savings by allowing design expertise and construction experience to influence each other in the early stages, but also it can shorten the total project completion schedule because it permits construction to begin before many design details have been finalized.[100] When used in its pure form, however, design-build eliminates the role the design professional plays in the traditional system as the owner's independent expert whose first function is to provide a complete project design that dutifully gives expression to the owner's requirements and whose secondary role is to represent the owner's interests during the construction process.[101] In short, the traditional method may serve project quality and utility better than it does budget and schedule, while design-build may better protect the budget and schedule, but at the risk of compromising the owner's control over project quality and utility.[102]

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96. *See, e.g.*, 2 BRUNER & O'CONNOR, *supra* note 23, §§ 6:1-:4; SWEET, *supra* note 57, § 17.03; Stover, *supra* note 21, § 3.01.

97. *See* Stover, *Construction and Design Contracts*, *in* CONSTRUCTION LAW, *supra* note 21, § 3.01[2][a].

98. *See* SWEET, *supra* note 57, §§ 17.03 & 17.04.A.

99. *See* 2 BRUNER & O'CONNOR, *supra* note 23, §§ 6:15 & 6:22; Schenck, *supra* note 29, at 1-2 to -3; Stover, *supra* note 21, § 3.01[4][c].

100. *See* SWEET, *supra* note 57, § 17.04.B; Stover, *supra* note 21, § 3.01.

101. *See* 2 BRUNER & O'CONNOR, *supra* note 23, § 6:4; SWEET, *supra* note 57, § 17.04.F; Stover, *supra* note 21, § 3.01[2][f].

102. *See* Stover, *supra* note 21, § 3.09[3]. This comparison will serve our purposes, although it oversimplifies. For example, even though design-build may reduce the total project costs and

To capture the strengths while avoiding the weaknesses of both design-bid-build and design-build, projects may adopt a hybrid approach to design, such as the hypothetical project uses. For our purposes, the main function of the hypothetical is to provide a simple illustration of this hybrid approach in a context that will help highlight the challenges of allocating design liability in today's construction industry. In keeping with the more traditional project delivery system, our developer elected to entrust overall design and contract administration to a professional design firm that is directly beholden to the developer and that should remain relatively free of the conflicts of interest that a design-build firm faces.[103] In this respect, the arrangement resembles the design-bid-build system. At the same time, a desire for the greatest expertise delivered with efficiency and economy encouraged the developer to rely on a specialty designer retained and managed by the prime contractor for the detailed design of the atrium. For this single but critical component of the project, the arrangement resembles a design-build approach because a single entity will take responsibility both to furnish the design services and the construction services for the atrium. Additionally, negotiating realities compelled the developer to rely on a consultant selected by the county to design the security system for the entire project, which is another relatively isolated but important project component.[104]

Whenever a project owner elects to divide design responsibility in such a manner, unless the specialty design is of limited scope and complexity, the owner and the lead designer should carefully adjust the traditional contracting structure to account for the specialty design features. Looking at the question primarily from the developer's perspective, the key objectives should be to enjoy the advantages offered by giving specialists greater control over limited aspects of the project and at the same time to preserve the quality control advantages of keeping overall project design and contract administration under the authority of the developer's architect.

An initial question the developer and its architect must address in this situation concerns the extent to which the lead design firm will provide services relating to the specialty designs. For this project, we may logically

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completion time, the traditional system facilitates competitive bidding and may allow the owner to establish a firm, reliable budget before entering into a contract for construction. *See id.* § 3.01[2][b] & [c].

103. *See* SWEET, *supra* note 57, at § 17.04.F.

104. In this respect, the project is similar to another common contractual arrangement in the construction industry in which the owner enters into separate contracts for distinct components of the work rather than obtaining all design services from a single designer and all construction services from a general building contractor. JUSTIN SWEET, SWEET ON CONSTRUCTION LAW § 3.10 (1997).

assume that the developer will expect its architect to furnish to both of the specialty designers certain design concepts and criteria necessary to coordinate the specialty designs with other aspects of the project. Moreover, if the developer itself has no project management capabilities, the developer may want the lead architect to have sufficient involvement with the specialty design to protect the integrity of the design process and the developer's ultimate interests in achieving a quality project that is completed on time and within budget. Thus, the terms of the contract between the developer and the architectural firm serving as the lead designer should define in detail the specific responsibilities of the members of the developer's design team in relation to the specialty components and the designers of those components.[105]

The developer's counsel should recognize that customary design services contracts will not adequately serve these purposes. Traditional construction contracting relationships, which assume that the owner's architect will be responsible to the owner for all significant aspects of the design, would leave a critical responsibility gap when applied to this project. First, the developer and its architect will need to identify the preliminary services the architect will provide in relation to the specialty designs. Second, they will need to agree on the extent to which the architect should be responsible for reviewing, approving, or taking other action on design documents provided by the specialty designers. Third, the developer will need to evaluate its relationships with those other than the architect who have design responsibilities for the project.

Let us consider these three issues separately. Recall that one risk the developer faces if it fails to address these concerns adequately by contract is that a court may choose to resolve disputes simply by declining to read into the contract any greater role for the architect in relation to the specialty designs than the contract explicitly identifies.[106] It should provide little comfort for the developer to learn from its trial counsel at a later date that for any one or more of the issues highlighted below, a tort-minded court might be persuaded to find a special relationship between the developer and one or more of the design participants that could support a negligence or professional malpractice claim.

Lead designer's preliminary services relating to specialty designs. With respect to the atrium, will it be sufficient for the architect to note on the drawings the location of the atrium and to add a notation such as "atrium design by others?" That seems inadequate for a relatively complex project that requires a coordinated design concept. At a minimum, the

105. As a corollary, the agreement should appropriately compensate the project architect for the additional services and liability risks involved.

106. The introductory paragraphs of Part II.D, *supra*, develop this argument.

developer's objectives might require the lead architect to provide preliminary drawings that show the location, configuration, and general appearance of the atrium, along with at least some additional details, such as how the atrium will connect with each tower. Other related design by the developer's architect may include selecting certain materials and colors and possibly designing some aspects of the atrium's interior space. Even if the parties do not mention design services of this kind in their contract, the preliminary plans the architect prepares may include them.

At this stage, the developer and its counsel should have in mind several fundamental issues to resolve in the architectural services contract. How can the developer confirm that the preliminary design criteria or other data furnished by the architect are sufficient to define and direct the specialty designs? How can the developer even know whether the division of design responsibility proposed by the architect's preliminary plans is appropriate? Will the architect approve the specialty designers or at least advise the developer about their design qualifications?

Lead designer's responsibility for specialty design documents. The parties also should consider in detail how to divide responsibility between the lead architect and the specialty designers for design documentation. For example, will the security consultant provide wiring details that must be submitted for building permit purposes? If so, will the architect's electrical engineering consultant incorporate those designs into the final electrical drawings that the electrical engineer signs and stamps? Will the architect's electrical engineering consultant be responsible to confirm that all wiring details comply with the applicable electrical code? Similarly, will the structural engineering consultant retained by the developer's architect confirm the structural integrity of the atrium or of certain connections between the atrium and structural components of the towers? Will the developer's architect retain final authority over these details, or will the atrium subcontractor take charge of them? Who will be responsible to confirm that the atrium design is consistent with the main project design in the sense that points of connection and intersection do not conflict, that various coordinated aspects are in fact coordinated, and that the final atrium design is aesthetically complementary to the overall project design? How will the parties resolve any relevant differences between the lead architect and the specialty designer? May the lead architect and its design team disclaim all responsibility for the final design of the atrium and the security system without violating the applicable standard of professional care, professional licensing standards, and governing building codes? Even if responsibility for the specialty design can be effectively separated from the balance of the project design, are there any specialty design details that should be approved by the lead design team for any reason? At a minimum, the situation cries out for a detailed provision in the agreement between the developer and its architect

to address the process by which specialty design documents will be submitted to the lead architect for review and comment.

Legal relationships between the developer and those furnishing specialty designs. Dividing design responsibility between the lead design team and the specialty designers is only the first step. To whatever extent the specialty design services fall outside of the scope of services for which the lead design team is responsible, the developer and its counsel should also consider what contractual controls and legal remedies should be available in connection with the specialty designs. Under the proposed arrangement, the developer will not be party to the contract with the steel fabricator who will furnish the critical design of the atrium, including its structural support system, but the developer will have a contractual relationship with the security consultant. To whom will the developer turn if the atrium design services are not performed adequately?

Although each specialty designer's professional mission is to furnish a design that serves the project owner's needs, customary contracting practices call for each of the specialty designers to have a contract solely with, and therefore to owe a contractual and professional duty solely to, its immediate client. In the case of the atrium design, the client will be the prime contractor who enters into a subcontract with the steel fabricator who will in turn furnish the atrium design. In the case of the security system, the client will be the developer, although the security system consultant was selected by, and presumably will act in some respects on behalf of, the county. The developer's agreement with the lead architect may completely exclude or significantly limit the responsibility of the lead design team for any of the specialty design. The developer's contract with the prime contractor will presumably call for the prime contractor to engage a design-build subcontractor for the atrium and to install all security equipment and components in accordance with the security consultant's design.

Under these circumstances, what contractual responsibility will the prime contractor have for the specialty designs? The prime contract should provide that the prime contractor's scope of work includes the detailed design, the fabrication, and the installation of the atrium. In the hypothetical project, the prime contractor will not function as a design-build firm in the usual sense; except for the atrium design, the prime contractor will construct the project in accordance with plans and specifications provided by the developer. Perhaps the developer will be able to negotiate a prime contract that imposes on the prime contractor unconditional design-build responsibility for the atrium. Even if that is so, in this situation, the prime contractor may not have the expertise to oversee and coordinate the atrium design by the steel fabricator. Additionally, the prime contractor will have no involvement with the security system design.

Will the developer have direct legal remedies against the subcontractor who will design the atrium? Courts will not normally recognize third-party beneficiary status in favor of a party such as the developer, who is merely an incidental beneficiary of the contractual obligations of the atrium subcontractor to the prime contractor.[107] To overcome that hurdle, as specialty design practices gain prevalence, the routine preference of sophisticated owners should be to require that all significant design services contracts to which the owner is not a party expressly grant to the owner the status of an intended third-party beneficiary.

An experienced developer should readily appreciate the value of securing third-party beneficiary status with respect to the contractual obligations of the specialty design professionals.[108] Although this tactic is foreign to the contracting models customary in the industry, it may well prove acceptable to all of the affected participants. Indeed, it is consistent with the legitimate expectations of the parties and the economic reality that the prime contractor is being paid to facilitate, coordinate, and administer the specialty design process for the benefit of the developer, while the specialty designers are being retained to provide a proper design for the benefit of multiple parties.

The developer also should be concerned about the extent to which each of the specialty designers will be obligated to maintain professional liability insurance that will cover damages the developer may incur as the result of errors or omissions in the specialty designs. As a result, the developer should seek, and should ultimately be prepared to bear any additional costs for, insurance programs to cover the unique risks inherent in divided design responsibility. Owners relying on specialty designers should recognize that professional liability insurance provided by the lead design firm alone is inadequate to protect against the risk of design errors and omissions when the lead firm does not assume full responsibility for all aspects of the design.

The developer also might look to such additional protections as performance guarantees from specialty trades and performance bonds issued by sureties for the prime contractor or the specialty trades. Such coverages will protect against loss from design problems that disappoint the performance expectations for the project whether or not those problems

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107. *See, e.g.*, Peter Kiewit Sons' Co. v. Iowa S. Utils. Co., 355 F. Supp. 376, 392-93 (S.D. Iowa 1973); *see also* SWEET, *supra* note 57, § 14.08.B (discussing "claims by third parties . . . based on the assertion that the claimants are intended beneficiaries of contracts to which they are not parties").

108. For a suggested contract provision that grants to the owner status as a direct third-party beneficiary of a design-builder's contract with an independent design professional, *see* Susan R. Brooke, *Protecting Design-Builder with Appropriate Contract Clauses*, *in* DESIGN-BUILD CONTRACTING HANDBOOK 297, 301 (Robert F. Cushman & Kathy Sperling Taub eds., 1992).

emanate from professional malpractice. Owners will provide the market demand that will motivate insurers and sureties to develop more comprehensive insurance and bond products to comprehensively cover the project-wide risks of design errors and omissions in projects in which multiple parties share design responsibility.[109]

This overview of the developer's perspective frames most of the issues that each major participant in the project must address in relation to the specialty design aspects of the project. Before turning to the perspectives of those who will furnish the design and construction for the hypothetical project, let us consider how the owner's perspectives might be altered if our hypothetical situation involved a public construction project.

2. Public Owner—an Aside

In the hypothetical, the county does not represent the developer's public counterpart because the county is not contracting for construction as a project owner. Instead, it will be a purchaser and end-user of a portion of the project once it is completed. Our review of an owner's perspective, however, would be incomplete without considering how a public owner who contracts for construction might look at shared design. A public owner arranging for design services shares a private developer's general perspective on the design process. But several additional considerations, peculiar to the public arena, also affect a public owner's contracting posture. As an aside, this section explores how these similarities and differences between the private developer and the public owner may affect the public owner's approach to specialty design.

The most obvious similarities between the public owner's and the private developer's perspectives on project design relate to the familiar trio of budget, schedule, and utility. These factors often will influence a public owner, as they do the private developer, to rely on a key design or project management professional whose loyalty runs to the owner, even while the owner seeks the efficiency offered by specialty designers. For these reasons, the public owner is just as interested as the private developer is in dividing design responsibility in a way that is efficient while leaving to the owner a degree of input and control consistent with the owner's own project management capacity. The public owner either may retain an outside architect or engineer to serve in the lead design and project administration role or it may rely on its own professional staff for that purpose. Just as is true for the private developer, how the public owner achieves the desired level of input and control often will depend on the extent to which it has in-house design and construction expertise.

The public owner and the private developer also are equally interested

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109. *See infra* Part II.D.7-8.

in contractual arrangements that establish clear lines of responsibility and that include adequate professional liability insurance to cover the risk of design errors and omissions. This should lead to all the same questions for the public project as those that arise in private ones. Who will establish the design concepts and criteria for the specialty design? Who will coordinate and integrate all aspects of the design? What action or response should be required of the lead design team when a specialty designer submits data? How will the specialty design arrangements affect the relationships between the owner and each of the participants in the project who are involved in any way with design services? The answers to these questions may lead the public owner to consider the same type of adjustments described in the preceding section concerning the more traditional contractual arrangements between the owner and the other participants.

Thus, when a public owner considers how to address the specialty design aspects of a project, it must take into account all of the fundamental considerations that a private developer does. As already suggested, however, the public owner's perspective also includes several factors unique to the field of public contracts. First, every significant public project involves the public purse, the public trust, and unpredictable political factors. Public scrutiny of projects financed with government funds means that every public agency and official involved with construction activities is a target for criticism.[110] These considerations may motivate public officials and contracting officers to allocate design responsibility more conservatively than is common for their counterparts in the private sector.[111] This conservative approach may cause the public owner to be more willing to bear additional costs for specialty design review and coordination by a design professional beholden solely to the owner. Alternatively, it may make a public owner more eager to adopt a contracting structure, such as a turnkey delivery method,[112] that vests all responsibility for the project in a single contracting party who will not have the option to point an accusing finger at another participant in the

110. *See* Gene Ming Lee, Note, *A Case for Fairness in Public Works Contracting*, 65 FORDHAM L. REV. 1075, 1075-76 (1996).

111. *Cf. id.* at 1103-05 (noting that while a public owner may seek the same efficiencies private owners seek, the government "must remain primarily concerned with its accountability to the people").

112. The term "turnkey" has multiple meanings in the construction industry, but generally refers to a project in which the builder agrees to deliver a completed building that meets the owner's requirements under a contract arrangement in which the builder retains all financial obligations and risks of ownership, design, and construction until the project is finished, at which time the purchaser pays the entire contract price and takes possession. If the turnkey builder materially defaults on its contract obligation, the purchaser, who has little or no investment in the project, may refuse to complete the transaction. *See* SWEET, *supra* note 104, § 3.12.

process.[113] It also should encourage the public owner to seek comprehensive insurance coverage against the risk of design defects and professional malpractice.

What is at least as important is that specific legal requirements applicable uniquely to public projects may alter the contracting environment for the public owner. For example, statutes, ordinances, or regulations may require or encourage competitive advertising or bidding procedures, public works bonds,[114] preferential treatment for local contractors, suppliers, and disadvantaged business enterprises,[115] affirmative action,[116] and wage protection for workers.[117] They may also dictate how the public owner must select design professionals.[118] Requirements of that nature may restrict the public owner's ability to use design-build, construction management, and other alternative project delivery systems.[119] Finally, legal controls also may encourage or require specific contract procedures and provisions on matters ranging from changes in the work to dispute resolution processes.[120]

For the sake of simplicity, the structure of our hypothetical project illustrates one approach by which a public owner might sidestep some of these special considerations. By contracting with the private developer for the judicial center on a turnkey delivery basis, the county has allocated to the developer many of the key risks of the project.[121] Assuming that the

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113. *See id.*

114. *See, e.g.*, Miller Act, 40 U.S.C.A. §§ 270a-270d (2000) (setting forth bonding requirements for federal projects). State or local law often imposes similar bonding requirements. *See generally* 3 BRUNER & O'CONNOR, *supra* note 23, § 8:155. *See* John H. Rains IV, Comment, *Construction Law: Enforcing the Notice and Filing Time Requirements of Florida's "Little Miller Act"—An Adventure in Statutory Construction*, 58 FLA. L. REV. 425, 427 (2006).

115. *See, e.g.*, Adarand Constructors, Inc. v. Pena, 515 U.S. 200, 205 (1995) (considering the constitutionality of a federal program designed to award highway construction projects to disadvantaged businesses).

116. *See, e.g.*, City of Richmond v. J.A. Croson Co., 488 U.S. 469, 477 (1989) (considering the constitutionality of a city plan requiring "prime contractors to whom the city awarded construction contracts to subcontract at least 30% of the dollar amount of the contract to one or more Minority Business Enterprises").

117. *See, e.g.*, Davis-Bacon Act, 40 U.S.C. § 276(a) (2000) (setting forth the prevailing wage requirement for federal projects); Cal. Div. of Labor Standards Enforcement v. Dillingham Constr. N.A., Inc., 519 U.S. 316, 334 (1997) (upholding California's prevailing wage requirements against a challenge based on the federal preemption provision of the Employee Retirement Income Security Act (ERISA), 29 U.S.C. § 1144(a) (2000)).

118. *See, e.g.*, Brooks Act, 40 U.S.C. § 544 (2000) (setting forth requirements for federal design contracts); CAL. GOV'T CODE §§ 4525-4529.5 (West 1995).

119. *See* Sloan v. Greenville County, 590 S.E.2d 338, 355-56 (S.C. Ct. App. 2003).

120. For example, Title 48 of the Code of Federal Regulations, known as the Federal Acquisition Regulations, or FAR, imposes comprehensive requirements for many projects funded by federal agencies. 48 C.F.R. § 1.000 (2005).

121. *See supra* note 112 and accompanying text.

county has sufficient bargaining leverage, it may negotiate a firm purchase price for the completed judicial center that meets objective standards and criteria incorporated into its contract with the developer. This method will be especially protective for the county if the contract conditions payment to the developer on a satisfactory inspection of the completed construction by the county's contracting officer and other inspection consultants.

At the same time that the county places most of the design and construction responsibility on the developer, the hypothetical arrangement provides for the security consultant designated by the county to design the project's security system, which is of special importance to the county. Depending on the laws and regulations that govern public works projects in this jurisdiction, the county may be able to satisfy any competitive bidding and other public works requirements in connection with its arrangement with the developer and may be able to assure design of the security system by the consultant of the county's choice by an indirect process that is subject to much less public regulation or scrutiny. This could be especially true if the bulk of the security consultant's work and fees can be absorbed into the developer's contract with the county.

Even in this arrangement, however, the county may not be satisfied to look solely to the developer to be responsible for design or construction defects and warranty obligations. Logically, we would expect the county to try to negotiate an all-inclusive construction warranty from the developer, and it should propose that the developer assign to the county certain warranties provided to the developer by trade contractors, suppliers, and manufacturers. Also, if the county is concerned because it has no contractual relationship with the security consultant for the final design of the security system, the county might seek third-party beneficiary rights under the contract between the developer and the security consultant. Additionally, the county might also have its own contract with the security consultant for preliminary services that provides additional remedies against design defects and professional malpractice.[122]

122. Public procurement statutes and regulations may actually encourage reliance on design-build subcontracting in public projects. If a public owner wishes to secure a specialty design from a design professional other than the lead design firm, a specification in the bidding documents for a design-build subcontract will allow the specialty design to be included within the scope of the general contract pursuant to the same public bidding process or other procurement procedure used to award the general contract rather than pursuant to a separate process required to retain a second design professional for the project. *Cf.* Kenneth M. Roberts & Nancy C. Smith, *Design-Build Contracts Under State and Local Procurement Laws*, 25 PUB. CONT. L.J. 645, 646-48 (1996).

3. Lead Design Professional

Architects and engineers who provide project design services are motivated both by business and by professional considerations. Design professionals typically provide services for a fee based directly or indirectly on the amount of time and resources the project requires.[123] They rarely accept investment or liability risks associated with a project except for liability risks stemming from professional errors and omissions.[124] Additionally, design professionals often place a high value on aesthetic considerations, and they know that each project will contribute to or detract from their professional reputations. In short, the lead design firm for a project probably will be eager to provide, for appropriate compensation, professional services for which it is qualified, and it should seek a level of participation in the project that is at least sufficient to promote and protect its professional interests and its reputation. But it should avoid assuming risks that it cannot control through the exercise of its expertise in providing professional services.[125]

In many projects, including our hypothetical, the owner's architect may be best suited to assure the orderly, efficient, and economical allocation of responsibility for certain specialty designs and to coordinate the specialty design services. We might easily imagine that for this project the architect may have initiated the idea to omit the atrium design from the main design services contract so that it could be handled more efficiently by a specialty firm not under the direct control of the architect. Even under those circumstances, however, note that the tort system would impose on the lead architect some limited duties relating to the specialty designs.[126] Arguably, by the mere act of recommending or approving a division of design services, the lead architect implicitly makes a representation to the owner that the proposed division of responsibility is professionally sound.[127] Even when the proposal comes from the owner or, as in the case of the security system for our project, from a third party, the project architect probably will choose to advise the owner on the feasibility of the

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123. *See* SWEET, *supra* note 57, § 11.04.A-B.

124. *See id.* § 15.03. For a consideration of the specialized role of a construction manager or project manager who might, to a greater or lesser extent, assume responsibility that crosses the traditional liability boundaries for design professionals and constructors, see *id.* § 17.04.

125. Professor Sweet provides a helpful overview of risk management considerations most relevant to design professionals. *See id.* §§ 15.01-.05.

126. "Architects and engineers must render whatever services they agree to perform in a competent manner conforming to the applicable standard of care." 5 BRUNER & O'CONNOR, *supra* note 23, § 17:39.

127. For example, design professionals face the risk of liability under a negligent misrepresentation theory in a variety of circumstances. *See* Aliberti, LaRochelle & Hodson Eng'g Corp. v. F.D.I.C., 844 F. Supp. 832, 844, 845-46 (D. Me. 1994); Ossining Union Free Sch. Dist. v. Anderson LaRocca Anderson, 539 N.E.2d 91, 91-92, 95 (N.Y. 1989).

idea and also probably will need to address design coordination issues that divided design responsibility presents.

Up to this point, this review of competing perspectives on the specialty design process has largely sidestepped the considerations of legal theory with which this Part began. But at this stage, legal theory forces itself directly back into the discussion. In projects involving specialty designs, tort law considerations should give the lead architectural or engineering firm a strong incentive to assure that its design services contract and the other relevant contract documents properly delineate the scope of the lead designer's responsibility in relation to specialty design services provided independently by others. The hypothetical project architect should be especially careful not to assume liability for design services performed by anyone other than the architect's own personnel and the consultants it retains. This concern may lead the project architect to propose express disclaimers of professional responsibility for the quality of specialty design as well as for the completion and timely performance of the specialty design services.[128]

The contract for the architect's services also should address what role, if any, the architect will have in selecting or approving specialty designers. While the owner may wish to rely on the architect's review of the specialty designer's qualifications, the architect may take the position that it should not perform that role for the very reasons that it is excluding the specialty design from its design services contract. For reasons already explored, the tort system also will impose some level of duty on the architect relating to the security system design even though it was the owner, rather than the architect, who proposed the specialty design arrangements for the project.[129]

The architect also should consider the extent to which it should have remedies against the project participants who play a role in the specialty designs. The architect may be limited to its contractual remedies against the developer. To a significant extent, this is so both because courts may be reluctant to impose any tort duty of care on other project participants for the protection of the architect and because any tort duty established may be subject to the remedial restrictions of the economic loss doctrine.[130]

Another important consideration is that the owner's design firm may confront a conflict of interest in determining the extent of its own scope of responsibility.[131] As specialized design gains further popularity and

128. *See* SWEET, *supra* note 57, § 12.08.C (discussing liability avoidance in the submittal context).

129. *See supra* notes 126-27 and accompanying text.

130. *See supra* notes 76-78 and accompanying text.

131. Architects and engineers have recognized since the industrial revolution the professional

acceptance, project architects may be tempted to assign high-risk design responsibilities to specialty designers and to disclaim all responsibility relating to the specialty designs. In fact, one might speculate that just such concerns could motivate a risk-adverse design firm to propose assigning to others complete responsibility for our hypothetical project's unique atrium feature. Similar considerations might tempt the lead design firm to perceive the county's proposal to use a specific security consultant as an invitation to recommend that the developer should retain that consultant directly as an alternative to the more conventional approach in which the owner's architect contracts to provide all design services and then retains specialty designers as consultants.[132]

In contrast to the architect's position, counsel for the developer probably will argue that the architect should accept more expansive project-wide design responsibility. At a minimum, a project architect who recommends securing certain design services through a specialty trade or separate consultant should prepare project design documents that establish appropriate design requirements and procedures. In the hypothetical project, this may mean that the owner's architect will prepare preliminary drawings for the atrium that establish many of its important features, perhaps including its footprint, appearance, and essential functionality. The architect also may establish and administer design submittal procedures for both the atrium designer and the security consultant to follow. These procedures might specify what drawings and other design documents for the specialty designers must be prepared, what design documents must be sealed by licensed design professionals, when initial plans must be submitted, and how those plans will be coordinated with related designs and then finalized and incorporated into the construction documents.[133]

Counsel for the architect may respond with several important concerns. The architect will not wish to assume liability for the design of the atrium and the security system because the specialty designers are not being retained as consultants to the architect. The architect and its consultants will expect to review designs furnished by the specialty designers because

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responsibility concerns that arise when the interests of the client conflict with the economic interests of the designer. *See* Stover, *supra* note 21, § 3.01[2][a].

132. Concern about such risk-shifting may justify state intervention on behalf of consumers in residential construction, but it should not justify similar action in the case of commercial contracts.

133. Additionally, in keeping with the recognized special relationship between a design professional and client, in a typical project, especially if the relevant contracts are silent on these points, tort law should impose a duty on the lead design firm to exercise professionally sound judgment in determining how to divide design among specialty trades and the lead design team and in performing all other professional services assumed under the contract by the lead firm in relation to specialty designs. *See supra* notes 126-27 and accompanying text.

the atrium and the security system will be integrated components of this project. But for what purpose will the architect and its consultants review the specialty designs, and what contractual obligations will the architect and its consultants assume with respect to the specialty designs? Counsel for the architect may object to any suggestion that the architect or its consultants will review specialty designs for errors or approve them as adequate or sufficient for their intended purposes. Perhaps the architect and its consultants should only review specialty design documents to confirm that they are consistent with the requirements contained in the preliminary project design and to judge whether they are aesthetically compatible with the design concept for the project.

The project architect and its consultants probably will agree to provide services to coordinate the specialty designs with other design components of the project because there will inevitably be points of physical and functional overlap or interdependence. It may be difficult, however, to define these services in precise contractual terms and to draw bright lines of contractual responsibility and legal liability between the project design services and specialty design services.

As always, the design firm should negotiate the contract for its services with one eye on its insurance coverage.[134] Many design firms routinely seek contractual limits on liability, and most expect additional compensation for the costs of special insurance coverage the owner or the project may require.[135] Many firms also aggressively seek additional compensation or liability exposure limits for any unique risks that the contracting structure imposes, such as in the case of indemnities or performance guarantees.[136] Currently available professional liability policies for design professionals cover negligence but not contractually assumed liability for specific results.[137] Consequently, design professionals will be loath to enter into contracts that create contractual liability not based on insurable negligence.

4. Specialty Designers

Those who provide specialty designs share some of the lead designer's objectives and concerns relating to the scope and responsibility for design services. In this respect, their negotiations with the prime contractor or other participant who contracts for the specialty design services should

134. *See* SWEET, *supra* note 57, § 15.05 (discussing risk spreading in construction contracts).

135. *See* 5 BRUNER & O'CONNOR, *supra* note 23, § 17:98.

136. *See* SWEET, *supra* note 57, § 13.01 (discussing compensation methods in construction contracts).

137. *See* Ava J. Abramowitz, *Professional Liability Insurance in the Design/Build Setting*, CONSTRUCTION LAW., Aug. 1995, at 3-4.

reflect many of the same considerations as those that apply to the negotiations between the lead design firm and the developer. They should make certain that the contract documents clearly identify the scope of services and functions that each design party will provide. In particular, specialty designers should insist that the contract documents clearly and consistently define the roles of each design party, including the responsibility for establishing design criteria and any performance standards, and that they provide adequate procedures for submitting and finalizing the specialty design documents.

A specialty designer can control some of the economic and liability risks it assumes by insisting that the owner and its lead design team furnish adequate design criteria and other information necessary for performance of the specialty design services. For example, the steel fabricator who will design the atrium for our hypothetical project must rely on important design parameters that the lead design team must furnish. This may include area and configuration requirements for the atrium, information concerning the points of connection and interface between the atrium and other components of the project, details about mechanical, electrical, or other systems for the project that may determine or affect related systems for the atrium, specifications for certain materials to be used, and sufficient criteria to establish the function of the atrium. In addition, if the atrium is required to satisfy any design or performance specifications, the owner or lead design team must provide those specifications clearly and in a timely manner.

Specialty designers also should consider the processes the owner and its lead design team will use to coordinate all design components for the project and incorporate them into the project design, including the final construction drawings for the project. Depending on the complexity of the project and the specialty design, it may be important for the contracts relating to specialty design to identify the preliminary drawings and design documents that the specialty designer must submit to the lead design team, the schedule for submissions, and the timing of any comments, approvals, or other actions from the owner or the lead design team. Will objective criteria govern the process for approval or acceptance of submissions from the specialty designer? Should there be any controls to prevent the owner or the lead design team from requiring unwarranted, unreasonable, or excessive changes to the specialty design?

The specialty design firms also will look for ways to control and limit their liability. In the first instance, a specialty designer would prefer to have liability only to its direct client. In the hypothetical project, this means that the steel fabricator would prefer to owe legal obligations only to the prime contractor, and the security consultant would prefer its obligations to run solely to the developer. This position, however, seems untenable in light of contemporary shared-design practices. The atrium

design services for the hypothetical project, for example, are for the primary benefit of the developer, not for the benefit of the prime contractor. The security system design is as much for the benefit of the county as it is for the developer. The fact that these specialty designs are being obtained indirectly through contracts with other project participants is largely a matter of efficiency and convenience. As a result, how strongly can the specialty designers protest proposals, as the earlier discussion suggests, that the specialty design contracts should at least expressly recognize the developer (in the case of the atrium) and the county (in the case of the security system) as third-party beneficiaries?

Even though the atrium subcontractor may be logically and practically compelled to acknowledge responsibility to the developer, and the security consultant may be equally compelled to acknowledge that it acts as much for the benefit of the county as for the developer, they should still be concerned about the possible liability exposure to other remote participants in the process. For example, if a specialty designer fails to complete its design in accordance with the agreed schedule, should the specialty designer be liable to other participants in the process for resulting delays and expenses?

The specialty designers will share the lead design firm's concerns about the extent to which professional liability insurance policies will cover the risks involved. The problems presented, however, may be more difficult for the specialty designers. An architectural firm capable of serving the lead design role for a project of this size may have relatively high professional liability insurance limits and may be positioned to negotiate favorable policy endorsements to enhance coverage. The steel fabricator and, especially, the security consultant may be differently situated.

A specialty designer also should be concerned about the availability of remedies against the architect and other project participants whose roles and responsibilities relating to the specialty design may cause damage to the specialty designer. The specialty designer faces the same potential limits on its rights in relation to participants with whom it has no contractual relationship as have already been discussed.[138] As a result of all of these considerations, specialty designers may have significant incentives to agree to multi-party agreements relating to the shared-design process.

138. *See supra* notes 107-08 and accompanying text.

5. Prime Contractor

As a New York case demonstrates,[139] the builder community will not passively accept whatever design responsibility owners and their design firms wish to impose on prime contractors and their subcontractors.[140] Building contractors specialize in managing construction risks, such as estimating and controlling labor and material costs, scheduling and coordinating the work of separate trades, manufacturers, and suppliers, and controlling the quality of workmanship.[141] By trade and experience, they are well-equipped to evaluate those risks and to establish fees based on the nature and extent of the construction risks they assume by contract.[142] Design-build contractors receive a significant premium for assuming all design risks of a project in addition to the normal construction risks. Prime contractors not retained on a design-build basis will resist the extra risks of specialty design unless they are fairly compensated and they believe they can manage those risks.

There is now evidence that prime contractors are beginning to recognize the additional risks they assume when owners and their design firms provide for specialty designs to be furnished by the prime contractor or through its subcontractors.[143] As the industry becomes more familiar with the shift of specialty design responsibility to the construction team, prime contractors will become even more sensitive to the additional costs involved in arranging, monitoring and administering specialty design subcontracts. Moreover, they will recognize the additional liability risks they assume when the scope of work under the construction contract includes design services. They will take these risks into account when they submit bids or proposals and when they solicit proposals from the specialty trades that will provide the specialty design services.

Prime contractors also will seek protection against these liabilities through a variety of contract provisions. For example, they will negotiate with owners for express design liability limits in projects in which they do not so much provide the specialty design services as arrange for them as an accommodation to the owner and the owner's design team. They also will seek indemnification and insurance protections from the specialty trades and specialty designers directly involved with the specialty design process. These provisions may lead to increased subcontract costs that the prime contractor will pass through to the owner in its bid or price proposal.

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139. Gen. Bldg. Contractors of N.Y. State, Inc. v. N.Y. State Educ. Dep't, 670 N.Y.S.2d 697 (Sup. Ct. 1997).

140. *See id.* at 698.

141. *See generally* 2 BRUNER & O'CONNOR, *supra* note 23, §§ 7:23-:24, 7:26, 7:29, 7:81-:88, 7:163-:170, 7:189-:194, & 7:225-:227.

142. *See* Stover, *supra* note 21, § 3.01[2][d].

143. *See, e.g.*, Okizaki, *supra* note 30, at 285-89.

To the extent that they assume design liability, prime contractors will attempt to secure professional liability insurance and pass those costs through to the owner as well.

Prime contractors also must carefully consider whether any special licensing requirements apply when they add design elements to an otherwise traditional construction project. Licensing requirements vary among jurisdictions in the manner in which they apply to firms that serve both design and construction functions for a project, but most allow design-build operations either expressly or implicitly so long as all design services are provided by or under the supervision and control of properly licensed professionals.[144] Prime contractors who enter into contracts that require trade contractors to supply specialty designs must determine whether the inclusion of what amounts to design-build responsibility within the scope of the prime contract creates licensing or other regulatory issues not involved in a traditional design-bid-build project.

If the prime contractor itself has little or no design expertise and is merely arranging for specialty design services to be provided by specialty trades to the owner and the owner's design team, the contract with the owner should reflect that limited role. Among other things, this means that the prime contract should state clearly whether the contractor's customary warranty for work free from defects and the customary indemnity covering the contractor's performance include the design services embedded in the specialty design features. The contract also should resolve whether and to what extent the owner will have contract rights against the specialty designers. Negotiations on these points seem likely to lead to provisions that give the prime contractor significant protection against liability for design defects in exchange for the requirement that the prime contractor must secure for the owner or other ultimate users express third-party beneficiary status in all specialty design agreements.

Under these circumstances, one might expect the lawyer negotiating on behalf of the prime contractor in our hypothetical project to press for contractual terms that limit or disclaim design liability. The prime contractor is not serving in this situation as a design-build contractor, presumably has no expertise in atrium design or security systems, and is not well positioned to control those design risks. The prime contractor merely is better positioned than any of the other participants to arrange for the specialized atrium design and to coordinate the installation of the security system because of its working relationships with the trade contractors and its experience and administrative capability and contractual authority to coordinate the work and schedules of the different

144. *See generally* State-By-State Guide to Architect, Engineer, and Contractor Licensing (Stephen G. Walker et al. eds., 1999) (summarizing specific design-build licensing requirements that apply from jurisdiction to jurisdiction).

trades. To the extent this is so, the prime contractor may resist accepting contractual liability for design risk, and may be even less willing to warrant against design defects.

This analysis may change if the prime contractor receives a premium for assuming design risk in addition to a normal general contractor's fee. Even in that case, the prime contractor may be reluctant to provide to the owner of the hypothetical project a warranty against design defects and errors in the atrium if the steel fabricator assumes liability for design matters solely based on the traditional professional standard of care, and the prime contractor is even less likely to agree to assume any responsibility for the security system design, which is being provided by a consultant retained by the developer.[145]

6. Subcontractors and Specialty Trades

Trade contractors who enter into subcontracts that include specialty design services should (at least in theory) price their services to include the extra costs and liability risks involved. Additionally, subcontractors share many of the prime contractor's concerns, especially with regard to whether the customary warranty of work and indemnity provisions of construction contracts include design services.

Those who provide the specialty design services through consultants rather than properly licensed employees must determine whether any special licensing requirements apply and how they can limit or adequately insure against whatever design liability they assume.[146] Specialty subcontractors that provide specialty design details through the services of in-house engineering personnel must determine what activities constitute the practice of engineering or another regulated profession and must arrange for properly licensed design professionals to prepare design documents to the extent required by applicable law or the contract documents. A subcontractor or specialty firm that provides design services either through its own employees or by retaining design consultants must carefully evaluate the availability and sufficiency of professional liability insurance or other insurance coverage for design activities.[147]

Some subcontractors who possess little or no specialized design

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145. The conventional doctrine is that by retaining the security consultant, the developer implicitly warrants to the prime contractor that the security system design is adequate for the purpose. *See infra* notes 249-53 and accompanying text.

146. Similar licensing and regulatory requirements also apply in the more limited case of shop drawings submitted by the specialty trade, but under a design-build subcontract the design functions involved are less likely to fall within any exception from the licensing requirements. *See* Steven M. Siegfried & Stanley P. Sklar, *Protecting Subcontractor With Appropriate Contract Clauses*, *in* DESIGN-BUILD CONTRACTING HANDBOOK, *supra* note 108, § 12.2.

147. *See infra* Part II.D.7.

knowledge will find themselves faced with specialty design responsibility merely because they are positioned in the industry to arrange for the specialty design or because they must contract with another subcontractor or supplier or manufacturer who works directly with the specialty aspect of the project. These subcontractors should evaluate their risks much the same as the prime contractor does because they will see themselves as arranging for design services as an accommodation to the owner and the prime contractor. These subcontractors will look for the same express liability limits and insurance and indemnity protections prime contractors will seek.

In some instances, specialty subcontractors may lack the negotiating position to secure sufficient protection of their legitimate interests except through the efforts of the prime contractor who deals directly with the owner. To the extent that is so, the specialty trades and their trade associations may be more likely than other participants in the construction and design process to lobby for governmental intervention to protect against an industry development that they may view as being unfairly forced upon them by design firms and large contractors with considerably greater leverage. There may be some validity to this position, although it is not necessarily different in character or significance from the chronically weak bargaining position that certain specialty trades endure in the marketplace.[148]

7. Insurers

Insurers view coverage for construction industry risks from two different perspectives. When presented with a claim under a policy, the insurer may be primarily concerned with whether the claim is within the coverage of the specific policy involved. This claims administration perspective produces hotly contested coverage disputes that often turn on microscopic analyses of policy provisions.[149] The insurer's second perspective stems from its broad business objective to provide valuable risk management products to the industry based on sound underwriting and pricing principles.[150] This second perspective is of greatest interest to this

148. *See* Stanley P. Sklar, *Selecting the Correct Delivery System and Negotiating the Right Construction Contract*, *in* 1 CONSTRUCTION LAW HANDBOOK § 11.07[B] (Robert F. Cushman & James J. Myers eds., 1999) (discussing issues the contractor should consider when qualifying an owner).

149. For a discussion of some of the most significant coverage issues for builders and design professionals, see generally O'Connor, *supra* note 58 (discussing types of required insurance, types of package coverage, and specific policies designed to cover specific risks).

150. *See* Gregg E. Bundschuh & David Collings, *Insurance and Bonding for a Design/Build Project*, *in* DESIGN/BUILD DESKBOOK, *supra* note 29, at 4-1 (discussing several products the insurance industry has developed to serve the special coverage needs of the design-build industry).

discussion. The purpose here is not so much to determine whether insurance policies issued without deliberate consideration of shared-design practices happen to cover the unique risks involved; it is to inquire how participants in the construction industry might use insurance to allocate some of those risks. Moreover, this discussion is as much interested in products that insurers might develop expressly for this purpose as it is in the relevance and limitations of products currently available.

As shared-design practices achieve greater prominence and continue to attract more intense scrutiny in the construction industry, insurers should proactively review the risks they assume under policy forms in current use. They also will, no doubt, assess the business opportunities for providing coverage to contractors, subcontractors, suppliers, and design professionals involved in shared-design practices. Although insurance coverage issues arising in the construction industry must always be resolved based on a review of the specific policies maintained by each insured party, some general observations will help frame several important insurance issues presented by shared-design practices.

Three distinct types of insurance offered to the construction industry are critically important to this discussion. They are public liability insurance, professional liability insurance, and property insurance. For our purposes, developments relating to the use of these policies in connection with design-build projects often will prove useful to highlight insurance issues that shared design also raises.[151] Those developments also suggest the opportunity for innovative insurance solutions targeted at shared-design practices.[152]

Public Liability Insurance. Commercial general liability (CGL) insurance is the principal form of insurance to cover an insured against liability for some of the most common risks of bodily injury and property damage that the insured may cause unintentionally to others.[153] A CGL policy generally covers the insured's liability to third parties for bodily injury to persons and for property damage if the injury or damage is attributable to an "occurrence," a term that includes ordinary accidents.[154] As is true with many other forms of insurance, CGL policies include detailed affirmative coverage provisions affected by equally detailed and

151. *See id.* at 4-2.

152. *See infra* text accompanying notes 157-65, 173-80 & 192-203.

153. *See* Bruce H. Schoumacher, *Risk Management and Indemnity*, *in* CONSTRUCTION LAW, *supra* note 21, § 13.02[2].

154. *See id.* §§ 13.02[2], 13.02[9]. Although the meaning of "occurrence" may present interesting issues, it is sufficient for our purposes to know that the term includes accidents of the sort that cause unintentional bodily injury or property damage commonly arising from normal construction activities and defects. *See id.* § 13.02[9].

potentially complex exclusions from coverage.[155] Moreover, endorsements frequently further modify the policies with respect to matters of special application or concern for the industry or the specific insured involved, and those endorsements may either expand or restrict coverage. Although the coverage terms of a conventional CGL policy, when considered in isolation, might extend to bodily injury or property damage caused by the insured's design errors and omissions, polices issued to participants in the construction industry typically reverse this result by expressly excluding injury or damage from professional design services.[156]

In response to demand from builders, the insurance industry has developed specific products to restore some coverage under a CGL policy for the insured's design errors and omissions. As one commentary explains, two endorsements in particular have been used for many construction firms, including design-builders, where coverage is required for some level of design activities:[157]

> The first, "Exclusions-Contractors-Professional Liability Endorsement" (Insurance Services Organization Form CG 2279), allows coverage for incidental design services performed as a part of the means and methods of construction, while excluding damages resulting from professional design services. The second, "Limited Exclusion-Contractor-Professional Liability Endorsement" (Insurance Services Organization Form CG 22 80), allows coverage for bodily injury or property damage from professional design services in connection with a project the contractor is also constructing.[158]

Endorsements of this nature to a CGL policy provide significant additional insurance protection to builders who also participate in design activities. They do not, however, fully protect the builder. One of the most important limitations of a CGL policy as it relates to the insured's design activities is that the policy only covers liability for bodily injury and property damage.[159] Many damage claims relating to design services seek recovery for purely economic loss,[160] such as schedule delays and the costs of redesign services. A CGL policy does not extend to many claims of that

155. *See id.* § 13.03[3] (discussing exclusions in commercial general liability policies).

156. Bundschuh & Collings, *supra* note 150, at 4-4.

157. *See id.*

158. *See id.*

159. *See* O'Connor, *supra* note 58. Bodily injury generally means physical bodily harm and includes death, sickness, disease and, to some extent, mental anguish with bodily manifestations. *See* Schoumacher, *supra* note 153, § 13.02[2][a].

160. *See* O'Connor, *supra* note 58.

type.[161]

Another relevant aspect of CGL insurance involves coverage for contractually assumed liabilities. CGL policies issued to construction firms commonly extend coverage to the insured's liability for contractual indemnities, typically captured by the concept of "insured contracts."[162] Contractual liability coverage issued to builders, however, traditionally excludes liability that an insured assumes under an indemnity in favor of an architect, engineer, or surveyor for injury or damage arising from common design activities.[163] Similarly, CGL policies issued to design professionals commonly exclude contractually assumed liability for injury or damage attributable to the insured's professional services.[164] Thus design-builders must be careful to evaluate the extent to which broad contractual indemnities that owners frequently propose for construction contracts may be excluded from the builder's contractual liability coverage.[165] Subcontractors and specialty firms that provide design services along with construction, fabrication, or installation work have the same concerns.

As the discussion to this point shows, with proper attention to detail, our hypothetical prime contractor and the affected subcontractors might have or secure CGL policies that offer significant protection against their risk of design liability to third parties, but their CGL policies alone will not cover all risks arising from their involvement in the design process. The expanded role of subcontractors and others who combine responsibility for design and construction services should create additional demand for enhanced CGL coverage for shared-design projects, as well as caution about the limitations of a CGL policy in relation to design activities.

Professional Liability Insurance. Architects' and engineers' professional liability policies insure risks most directly associated with design malpractice.[166] These policies primarily cover liability for damages caused to others and arising from the insured's professional negligence in rendering design services.[167] Although the policies cover the most common claims for professional malpractice, coverage may be limited to professional services listed by the insured in the policy application.[168] Moreover, some policies exclude coverage for services that are "not

161. *See* Schoumacher, *supra* note 153, § 13.02[2].
162. *See id.* § 13.02[3][b].
163. *See id.*
164. *See id.*
165. Bundschuh & Collings, *supra* note 150, at 4-4 to -6.
166. *See* Schoumacher, *supra* note 153, § 13.06.
167. *See id.*
168. *See id.* § 13.06[1].

customary or usual" for the insured's profession.[169] Such an exclusion may present difficult questions when a design professional is involved in shared-design services. In the hypothetical project, for example, it may not be clear what effect this exclusion may have when the lead architect participates in decisions about the extent to which design components should be assigned to specialty firms or consultants, or when the engineering consultant who designs a specialty component for the steel fabricator or the security firm participates in the process of integrating those plans into the overall project design.[170]

Other exclusions of potential significance in our hypothetical include those relating to warranties and guaranties, estimates of cost, quality or time of completion, joint venture activities, indemnity obligations of the insured, and the failure to complete work in a timely manner, unless the failure is due to professional negligence.[171] Some of these exclusions may be especially relevant with respect to professional design services provided by specialty designers.[172]

Although contractual liability insurance is available to architects and engineers under professional liability policies, the coverage usually applies only if the liability assumed by contract is a matter for which the design professional otherwise would have been liable as a matter of professional malpractice.[173] Thus, a design professional will often be reluctant to give an indemnity to the client except for the limited purpose of defending the client against claims arising from the design professional's negligence in providing professional services.

Limited forms of professional liability coverage are available to contractors, subcontractors, and suppliers who are not directly involved in the design professions.[174] Professional liability coverage also is available to design-builders and design consultants, although several significant questions arise concerning the extent of coverage the policies provide in

169. *Id.* § 13.06[4][e].

170. The exclusion could lead to several other questions in the hypothetical, especially in connection with services, review, and recommendations by any one of the design professionals involved in the process, beginning with the lead architect's decision to recommend or at least implicitly accept the division of design responsibility in the first place, continuing with the selection or tacit approval of specialty designers, and proceeding toward the final, integrated construction plans. Among other things, several design professionals will be involved in the steps required to coordinate the work of different design professionals, a process that may produce delay or lead to unanticipated revisions or changes that cause delay or additional expense in related design and the construction services by others.

171. *See* Schoumacher, *supra* note 153, §§ 13.06[4][a], [f], [i], [j] & [l].

172. *See supra* Part II.D.6.

173. Bundschuh & Collings, *supra* note 150, at 4-7.

174. *See* O'Connor, *supra* note 58; Schoumacher, *supra* note 153, § 13.06[9].

a design-build context.[175] First, professional liability insurance generally does not cover activities other than professional design services, which may be defined as services normally provided by architects, engineers, and surveyors.[176] Thus, in order to know whether professional liability coverage applies, one must distinguish between construction activities and design professional services. Second, the loss involved must be attributable to professional negligence, such as the failure of the insured to possess or exercise the degree of care that other professionals performing similar services exercise under similar circumstances.[177] Performance that is erroneous, ineffective, or in breach of a contractual duty does not necessarily constitute professional malpractice.[178] These factors may be especially important when the insured functions both in a design role and a construction role, because the applicable contract may include standards, warranties, or performance guarantees that create contractual liability for unacceptable performance that is not malpractice.[179] Additionally, the insurer may add exclusions to a professional liability policy issued to a design-builder to exclude coverage for such common claims as schedule delays or safety problems.[180]

Property Insurance. Property insurance, commonly in the form of a builder's risk policy, insures against accidental damage to the project itself,[181] which is a risk ordinarily excluded from a CGL policy except when the insured caused the damage or is otherwise responsible for it.[182] A builder's risk policy covers damage to the building or project under construction, along with related equipment, materials, and supplies, but it does not cover damage to unrelated property.[183] These policies include broad exclusions relating to faulty workmanship or design, but those exclusions do not necessarily eliminate coverage to the extent that the faulty workmanship or design results in an insured peril, such as fire, that

175. Bundschuh & Collings, *supra* note 150, at 4-7; Schoumacher, *supra* note 153, § 13.06[9].

176. *See* Schoumacher, *supra* note 153, §§ 13.06[1] & [4][e]. *See generally* Bundschuh & Collings, *supra* note 150, at 4-7.

177. *See, e.g.*, Bell Lavalin, Inc. v. Simcoe & Erie Gen. Ins. Co., 61 F.3d 742, 746 (9th Cir. 1995) (holding that the engineer's professional liability policy did not cover damages attributable to breach of contract); Robert L. Meyers, III et al., *Risk Allocation From the Designer's Perspective*, 452 PLI/REAL 129, 133 (2000) (standard of care); Schoumacher, *supra* note 153, § 13.06 (standard of care).

178. *See id.*

179. *See* Bundschuh & Collings, *supra* note 150, at 4-7.

180. *See id.*

181. *See* Schoumacher, *supra* note 153, § 13.05[1].

182. A CGL policy only covers damage for which the insured is legally obligated. *See* City of Scottsbluff v. Employers Mut. Ins. Co., 658 N.W.2d 704, 709-10 (Neb. 2003). *See generally* Rowland H. Long, *Commercial General Liability Insurance*, *in* 2 THE LAW OF LIABILITY INSURANCE § 10.04 (2005).

183. *See* Schoumacher, *supra* note 153, § 13.05[3].

damages the project.[184]

Either the owner or the builder may purchase the builder's risk policy for a project.[185] If the owner purchases the policy, the insurer that pays the owner's claim for damage to the project attributable to the builder's fault may seek to recover the loss from the builder by invoking policy provisions under which the insurer is subrogated to the insured's claims against any party who caused the loss.[186] Builders commonly request waivers of this right of subrogation.[187] A waiver of this type is even more significant to a design-builder than it is to a conventional builder because the insured owner may have a claim against the design-builder due either to normal negligence in construction activities or to design errors and omissions.[188]

The above discussion shows that the net result of multiple, distinct policies is that those involved in design-build projects face the risk of significant gaps in insurance coverage. Some gaps may arise because limited coverage and specific exclusions under different policies carried by a single insured may leave some risks uncovered. Other gaps may exist because some participants in the design process may carry significantly lower policy limits than other participants or because one participant inaccurately concludes that certain activities are adequately covered by another participant's insurance policy. The latter situation may occur, for example, when a design-builder who subcontracts the design work to an architect or an engineer decides not to cover the risk of its own fault for design activities because the design subcontractor maintains professional liability insurance.[189] Still other gaps may exist because, while CGL policies normally apply on an occurrence basis, meaning that a policy applies if the occurrence that caused the injury or damage happened during the policy term, professional liability policies normally are issued on a claims-made basis, which means that the coverage applies only to claims made during the term of the policy.[190] The good news for those involved in design-build projects is that the insurance industry has responded with

184. *Id.* § 13.05[6]. For example, if faulty installation work results in extensive water damage, the builder's risk policy may be interpreted to cover the water damage. *Id.* § 13.05[6] & n.37. Similarly, if a design defect weakens a wall, a builder's risk policy will not cover the costs of repairing the wall, but if the wall were to collapse as a result of the same defect, the policy probably would cover the costs of rebuilding the wall. *See* O'Connor, *supra* note 58.

185. *See* Bundschuh & Collings, *supra* note 150, at 4-8.

186. *See, e.g.*, Rahr Malting Co. v. Climatic Control Co., 150 F.3d 835, 837 (8th Cir. 1998).

187. *See* 2 BRUNER & O'CONNOR, *supra* note 23, § 5:231 (describing the scope or the general conditions primary waiver of subrogation clause and other issues that arise regularly with the primary waiver of subrogation clause).

188. Bundschuh, & Collings, *supra* note 150, at 4-8 to -9.

189. *See id.* at 4-8.

190. 4 BRUNER & O'CONNOR, *supra* note 23, § 11:6.

coverage options tailored to the needs of these projects.[191]

One increasingly common insurance product that may prove especially useful, both for avoiding gaps in coverage and for providing more comprehensive coverage on a cost effective basis, is the consolidated or controlled insurance program, sometimes referred to as a wrap-up policy.[192] These policies insure multiple participants in a construction project and may be used for multiple risks.[193] For example, a wrap-up workers compensation policy may cover the general contractor and all or most of the subcontractors working on a project.[194] At least in some situations, consolidated insurance programs may only prove feasible in conjunction with large projects.[195] While wrap-up insurance policies may be used to cover professional design malpractice, they do not seem to be in common use for that purpose,[196] although a concept similar to wrap-up insurance for professional liability coverage may in essence be available under a different name.[197] Because of the complexity involved in shared-design practices, consolidated insurance programs may represent a promising alternative for providing more comprehensive coverage for the risks involved when multiple participants contribute to different components of a project's design. It is too early, however, to know how useful these programs may be.

The insurance industry has also developed other products that may be of particular value for shared-design projects. Project professional liability policies may be used to address some of the most significant limitations of the customary professional liability policies.[198] One of these limitations is that architects' and engineers' professionally liability insurance policies normally establish a single aggregate amount of coverage for the term of the insurance.[199] As a result, claims against the policy arising out of one

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191. *See infra* notes 192-203 and accompanying text.

192. *See* 4 BRUNER & O'CONNOR, *supra* note 23, § 11:124.

193. *See id.*

194. *See id.* § 11:124 n.4.1.

195. *See id.* § 11:124.

196. *See* Bundschuh & Collings, *supra* note 150, at 4-16 (discussing controlled insurance programs as a device to provide workers' compensation, employer's liability, commercial general liability, and builder's risk coverage only); Schoumacher, *supra* note 153, § 13.08[2], 13.08[3] (describing wrap-up insurance programs as primarily used for general liability, workers' compensation, and employers' liability purposes but noting the possibility of a program including public liability insurance covering at least bodily injury and property damage arising out of professional services); O'Connor, *supra* note 58, at 10 (discussing professional liability coverage as one of the potential uses for controlled insurance programs).

197. It would seem that a project-specific professional liability policy may be structured to achieve a result similar to a wrap-up insurance program. *See infra* notes 198-201 and accompanying text.

198. *See* Bundschuh & Collings, *supra* note 150, at 4-18 to -22; O'Connor, *supra* note 58.

199. Schoumacher, *supra* note 153, § 13.06[7].

project may reduce the amount of insurance available for other projects. By requiring a project professional liability policy, the project owner can assure that the agreed limits of coverage will be available for claims relating to that owner's project. When an owner obtains a project professional liability policy it may be possible to cover multiple insureds in a manner similar to the way a wrap-up insurance program covers insureds for purposes of workers' compensation, employers' liability, and public liability coverage. An alternative product more recently offered by the insurance industry to address these problems is an owner's protective errors and omissions policy that provides coverage to the owner for claims in excess of the primary professional liability policy of the design firms involved in the project.[200] Project professional liability policies and owner's protective policies each have advantages and disadvantages that owners must weigh carefully.[201]

Based on the experience in the design-build industry, we should expect that insurers will re-evaluate the insurance needs of their customers involved in shared design, and that they will develop or modify available insurance products to address the unique risks involved. Whatever coverage is offered for shared-design errors and omissions will reflect the insurer's underwriting practices and may lead to new or modified exclusions from coverage for some policies. The availability of professional design liability insurance for prime contractors, subcontractors, and suppliers will directly affect the basis upon which those participants in the design and construction process will agree to accept design responsibility. The same considerations that will cause those participating directly in a design-build subcontract process to reevaluate their uninsured liability exposure should also encourage insurance carriers to determine whether they can offer sound, new products to their customers to insure the unique risks involved.

This leads to a final point about the dynamic relationship between the changing demands in the construction industry for insurance coverage and the emergence of new products in the fluid insurance marketplace. In fact, because the insurance market responds to many variables, and insurers and their insureds often negotiate special policy terms to meet unique circumstances and needs, any general or static discussion of available insurance products is necessarily incomplete and outdated.[202] The demand

200. *See* Bundschuh & Collings, *supra* note 150, at 4-18 to -22; O'Connor, *supra* note 58.

201. *See* Bundschuh & Collings, *supra* note 150, at 4-20 to -22.

202. *See id.*; O'Connor, *supra* note 58, at 10. Both of those articles repeatedly demonstrate that some of the most interesting potential insurance solutions for design-build projects are still evolving and that negotiations between the insurer and the insured often produce tailor-made policies or endorsements. *See* Bundschuh & Collings, *supra* note 150, at 4-18 to -22: O'Connor, *supra* note 58, at 10.

in the construction industry for specialized insurance coverage has motivated the insurance industry to offer new products, and in turn, the availability of those products has altered contract negotiations.[203] To see how this reciprocal relationship might be important to shared-design practices, we can again turn to the experience in the design-build projects. Astute owners now insist on design-build contract terms that require their builders to maintain appropriate insurance to cover design activities. Design-builders often respond to those requirements both by insisting on contractual insurance requirements that reflect the specific coverage available to them and by proposing contractual limits on their liability for design defects that match the limits of their insurance coverage. The result in these situations may be an insurance package carefully tailored to the specific project and for which the project owner ultimately bears the costs to the extent the agreed insurance requirements impose premiums on the construction and design participants above what those participants pay for their customary insurance coverage.

Similar results should follow as those involved with shared design and their insurers work out coverage appropriate to each participant's design role and risk exposure. In projects involving shared responsibility for specialty design, contracting parties should begin to introduce more specific requirements concerning who should insure which risks for whose benefits. For example, when a trade firm will provide significant design services under a subcontract with the prime contractor, the project owner may insist that the prime contract specify the types and limits of insurance that the subcontract must require of the specialty firm. In the hypothetical project, the prime contractor might logically agree that it will require the steel fabricator both to recognize the developer as a third-party beneficiary of the atrium design services and to maintain appropriate professional liability insurance. In exchange for including these provisions in the subcontract, the prime contractor might secure the developer's agreement to exclude any obligation on the prime contractor's part to furnish its own professional liability insurance covering the atrium design and to limit the prime contractor's liability for problems with that design. Such an arrangement could avoid costly duplication of insurance coverage and would allocate liability for the atrium design to the participant most able

203. An unusual example of this phenomenon is "project management protective liability" insurance, which is expressly touted by a 1997 American Institute of Architects form contract in a way that might suggest that a policy by this name has gained widespread acceptance. 2 BRUNER & O'CONNOR, *supra* note 23, § 5:218 & 7:16. In fact, it appears that only one insurance company has offered a policy using that title, and there appears to be no evidence that the policy has achieved any significant level of recognition in the construction industry. *See id.*; David R. Hendrick, *Insurance Law: Understanding the Basics Regarding "Additional Insureds,"* 690 PLI/LIT 591, 647-48 (Apr. 2003).

both to control and to insure that risk. This might be especially logical if the prime contractor does not itself provide any professional design services, employs no design professionals of its own, and has no special qualifications to supervise the specialty design activities. In effect, as participants in the construction process begin to appreciate more fully the unique insurance requirements of a project dependent on shared responsibility for specialty design, they will create a more sophisticated demand for appropriate insurance coverage and a more coherent contractual approach to allocating the risks of design problems.

8. Sureties

Sureties commonly issue bonds to back the performance of contractors, subcontractors, and suppliers.[204] A performance bond in the construction industry is the joint obligation of a surety and its principal, who is the contractor or other party obligated to provide construction services, in favor of the owner or other beneficiary of the bond.[205] The principal and its surety promise to pay up to the stated amount of the bond to the beneficiary if the principal defaults in performance on the contract for construction services.[206] A surety bond fundamentally differs from insurance. Unlike an insurance policy that shifts a risk from the insured to the insurer, a surety bond is the joint undertaking of the principal and the surety exclusively for the financial protection of the beneficiary.[207] By separate agreement, the surety normally requires the principal, and often those financially interested in the principal, to reimburse or indemnify the surety for all payments made and expenses incurred under the bond.[208] In effect, a surety bond is a secondary obligation that provides third-party financial security to the beneficiary to protect against the principal's default.

Because surety bonds normally impose liability based on contractual

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204. *See* 4 BRUNER & O'CONNOR, *supra* note 23, § 12 (providing a comprehensive overview of the history, use, and interpretation of surety bonds in the construction industry).

205. *Id.* § 12:2. The surety industry uses that stalwart example of legalese "obligee" to refer to the person or entity in whose favor the bond is issued. *See id.* Perhaps the reader will forgive use of the less conventional, but perfectly plain and apt, term "beneficiary."

206. *See id.* The discussion in the text is primarily concerned with performance bonds, although in practice sureties typically issue a performance bond for a construction project in combination with a payment bond, which assures that the principal will pay all those who provide labor, material, and services as subcontractors, laborers, and suppliers under the prime contract. *See id.* § 8:152.

207. *Id.* §§ 12:7, 12:9. Insurance companies or their affiliates, however, also are frequently in the business of issuing surety bonds. *Id.* § 12:9.

208. *See id.* § 12:11. Absent an express indemnity or reimbursement agreement, the surety may have an equitable right of indemnity against the principal jointly obligated on the bond. *See id.* § 12:98.

breach and not negligence, they are not necessarily appropriate to protect against professional malpractice. Moreover, because surety bonds and the underwriting techniques of sureties developed in the construction industry specifically to assure performance by traditional construction firms, they have not typically been issued to design firms.[209] As discussed below, however, this does not mean that a surety bond cannot provide protection for design problems attributable to the principal.

The surety industry has had relatively little experience with shared-design projects. In the same way that we considered insurance for shared design by examining developments in insurance for design-build, we may gain some insights into how sureties may eventually react to the explosion in shared design by reviewing bonding practices for the design-build industry. The use of surety bonds in the context of design-build is itself still in a relatively early stage, but there are significant signs that both the construction industry and the surety industry favor the increased availability of bonds to assure performance of design-build contracts.[210]

A threshold issue sometimes arises as to whether or not a bond issued in connection with a design-build project in fact covers the principal's design services as well as its construction obligations. In one case, the court held, against the surety's argument to the contrary, that a surety who issued a bond to a project owner on behalf of a design-builder was liable up to the amount of the bond for damages caused by the differential settlement of the building foundation that was attributable to design errors committed by the builder's in-house architect and its engineering consultant.[211] In another case, the court held that a county ordinance governing bonding for public works projects required the county to secure a bond in the full amount of a design-build contract, inclusive of the portion of the contract price related to engineering services, quality assurance, and program management.[212]

The surety industry is becoming more comfortable with the special underwriting considerations involved in issuing bonds covering design-

209. Bundschuh & Collings, *supra* note 150, at 4-9 to -11.

210. *See id.* at 4-10 to -11, 4-14 to -15; 4 BRUNER & O'Connor, *supra* note 23, §§ 12:83-12:95 (discussing various elements and risks that sureties consider when deciding whether to bond the performance of a design-build contract); *see also* Philip L. Bruner, *Design-Build Viewed from the Surety's Perspective*, CONSTRUCTION LAW., July 2000, at 17 (describing changes in "surety industry attitudes toward bonding design-builders").

211. Nicholson & Loup, Inc. v. Carl E. Woodward, Inc., 596 So. 2d 374, 379, 389-90 (La. Ct. App. 1992); *cf.* Herbert S. Newman & Partners, P.C. v. CFC Constr. Ltd. P'ship, 674 A.2d 1313, 1317 (Conn. 1996) (finding that an architect retained by a general contractor was entitled to recover under the contractor's payment bond even though the statutory requirement for a payment bond only protected those who provide labor and materials, and concluding that the terms of the bond could be, and were, broader than the coverage that was required by statute).

212. Sloan v. Greenville County, 590 S.E.2d 338, 355-56 (S.C. Ct. App. 2003).

build contracts.[213] One commentator notes that while sureties sometimes agree to issue bonds to cover the full performance of a design-builder and that the growing popularity of design-build may make that practice more common in the future, many sureties are reluctant to do so.[214] The same commentator gives the following example of a contract provision used expressly for the purpose of confirming the understanding of the principal and the beneficiary that the bond does not protect the beneficiary from design errors by a design-builder:

> The bond does not cover any responsibility for negligence, errors or omissions in design, or warranty of design. Coverage under the bond is limited to only the construction phase and post-construction phase of the contract. The bond premium is based only upon the value of the construction and post-construction phase of the contract and not upon the design aspect of the contract.[215]

Our hypothetical project illustrates some special problems that shared-design projects present for bonding purposes. The prime contractor may have a perfectly acceptable record for successfully completing projects of similar size and complexity. It also may be a financially strong firm that has a well-established relationship with a surety. Yet, will that surety be willing to issue a performance bond for a contract that includes the design of the atrium as well as the construction of the entire project? What experience does the prime contractor have in furnishing or overseeing design activities? What controls does it have over the steel fabricator? One possible approach is for the prime contractor to require the steel fabricator to provide a bond covering the design-build subcontract as financial assurance to the prime contractor's surety.[216]

Also note that even if the prime contractor is able to secure a bond for the hypothetical project that includes the atrium design, that bond would not also cover the design of the security system because the security consultant is not a subcontractor to the prime contractor. While the security consultant might be able to furnish its own bond, that is not an

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213. *See* Bruner, *supra* note 210, at 17-21 (discussing underwriting considerations in surety bonds to apprise the design-builder and the surety of significant risks).

214. Bundschuh & Collings, *supra* note 150, at 4-10 to -11; *see also* Sheffield Assembly of God Church, Inc. v. Am. Ins. Co., 870 S.W.2d 926, 928 (Mo. Ct. App. 1994) (finding that a proposed design-build contract was divided by the parties' agreement into separate contracts for construction and for architectural services and that the surety issued a bond to cover the construction contract but refused to issue a bond to cover the design services agreement).

215. Bundschuh & Collings, *supra* note 150, at 4-10.

216. *See id.* at 4-15 (suggesting that when a joint venture between a builder and a design firm seeks bonding, the builder member of the joint venture may be able to provide the bond).

ideal option. First, it is still uncommon for sureties to issue performance bonds for contracts solely for design services. While there is no reason that a bond could not be issued on behalf of the security consultant, a specialized design firm is even less likely than a lead design firm to have the financial strength and record on bonded projects that a surety's underwriting standards may require. Furthermore, the use of two bonds issued by different sureties for discrete portions of the project will create the risk that if the developer has a claim, each surety will raise a defense based on the acts or omissions of the principal under the other bond.[217]

Arguably, the optimum solution for bonding the hypothetical project might require that a surety issue a bond on a project basis. There are situations in which the parties may be able to negotiate unique bond terms tailored to the specific project, especially if the project is a large one and the beneficiary has significant bargaining strength.[218] That prospect, however, seems especially problematic for the hypothetical project because of the difficulty the parties will face in satisfying the likely underwriting standards. Without restructuring the arrangement significantly, there is no single principal motivated to accept full responsibility for the entire scope of services and work that would be covered by the bond, nor is there any reason to expect that the prime contractor, the security consultant, and the steel fabricator will agree to be jointly and severally liable to the surety, or that it is practical for the parties to apportion the indemnification or reimbursement arrangements necessary to satisfy standard financial underwriting by the surety.

The experience of design-builders and their sureties may serve as a prelude to the use of surety bonds issued expressly to cover the design as well as the construction obligations of firms that provide design in combination with specialty construction or installation services. Sureties may, however, be extremely cautious in underwriting the risks involved. In light of contemporary shared-design practices, sureties should review the terms of a contract or subcontract proposed for bonding to determine what design responsibility it purports to impose on the surety's principal. A surety will be unlikely to issue a bond to assure performance under a contract that imposes design responsibility if the principal does not have

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217. As noted in other parts of this Article, the shared-design process inherently involves complex relationships between multiple participants who play some role in the specialty design process. *See supra* Part II.C. Even if the specific claim that arises relates solely to the security system, the security consultant and its surety may be able to develop a defense based on the acts and omissions of the prime contractor, one or more subcontractors, or the lead architect, all of whom are in some way involved in reviewing, coordinating, integrating, or carrying out aspects of the security system design. *Cf.* Thomas v. Smith, No. 3:03CV1398, 2004 WL 1969401, at *2, *5-6 (D. Conn. Sept. 3, 2004) (permitting an architect to seek apportionment of a design liability claim among subcontractors who participated in the design).

218. 4 BRUNER & O'CONNOR, *supra* note 22, § 12:20.

a demonstrated record for successfully performing design services of the type involved, does not completely control the design services, or lacks sufficient financial resources to reimburse the surety for the consequences of design errors.[219] Large and complex projects that depend on shared-design services, such as are involved in the hypothetical project, may eventually provide a market for surety bonds that address the unique risks of specialty design practices within the context of traditional project delivery systems.[220]

III. CONTRACTS FOR DESIGN AND DESIGN FOR CONTRACTS

A. *The Importance of Private Risk Allocation in the Construction Industry*

With the interdependent relationships of shared design in mind, consider the important social function that business contracts serve. They provide a flexible framework by which business enterprises may allocate commercial risks effectively, predictably, sensibly, and efficiently.[221] There are at least three ways to explain how contracts serve these purposes. The first stems from the legal enforceability of agreements: Contract law provides meaningful legal remedies to back up commercial bargains.[222] The significance of this factor alone, however, may be limited by the substantial costs associated with enforcing legal remedies through the legal process.[223] The second factor is primarily a matter of the social structure of the business community: A firm's reputation for honoring its written commitments and its record for performing as promised affects the firm's prospects for future success.[224] This second factor can at least sometimes be a powerful force in the construction industry, where reputations may be long-lived within the relevant marketplace, be it local, regional, national, or international.[225] Developers, design professionals, general contractors, trade contractors, and other participants in the construction industry often must compete intensely for projects. The

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219. *See* Bruner, *supra* note 210, at 17-18.

220. *See* Kenneth N. Ryan, *Bonding Design-Build Contracts*, *in* DESIGN-BUILD CONTRACTING HANDBOOK, *supra* note 108, §§ 5:3, 5:7.

221. *See* Jeffrey M. Lipshaw, *Contingency and Contracts: A Philosophy of Complex Business Transactions*, 54 DEPAUL L. REV. 1077, 1084-85 (2004).

222. The function of contract law in our society derives from the fact that it "in some way recognizes [a contractual promise] as a duty." *See* RESTATEMENT (SECOND) OF CONTRACTS § 1 (1981).

223. *See* Karen Eggleston et al., *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 NW. U. L. REV. 91, 119-22 (2000).

224. *See id.* at 92.

225. *Id.* at 115-19.

selection process, whether formal or informal, may place significant weight on the firm's reputation and performance record.[226]

A third way in which formal business contracts function effectively and efficiently to govern commerce is probably the most important factor to consider for our purposes. Business contracts help those engaged in complex commercial relationships to govern themselves, largely without the coercive, costly, inefficient, and unreliable supervision of government institutions.[227] When serious commercial disputes arise, business people pursue informal solutions, often in consultation with their lawyers, accountants, insurers, financial consultants, and other advisors. To some considerable extent, the informal process implicitly recognizes that courts, arbitrators, and mediators will give meaningful deference to the rules set out in formal, written contracts between the disputants. As a practical matter, thoughtfully conceived, well-drafted, comprehensive business contracts often are self-enforcing. This is one important reason why businesses, including most participants in the construction industry, routinely use detailed written agreements. The fact that a small proportion of building construction disputes requires formal dispute resolution confirms rather than belies the overriding effectiveness and social utility of contract in the commercial world.[228]

A construction project provides an especially apt forum for a comprehensive contractual approach to risk allocation. Design professionals, general contractors, trade contractors, suppliers, manufacturers, insurers, sureties, and others in the construction industry all assume specific risks for fees. Short-term profit on any specific construction project, and often long-term success in the industry, depends on the participant's ability to predict the costs of performance, which in turn requires a comprehensive and objective inventory of contractual activities, responsibilities, and risks.[229] All participants can benefit by routinely operating under contracts that reflect an economically-rational

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226. This seems to be true to a significant extent in a wide variety of contexts. *See* Konefsky, *supra* note 5, at 1182 (subcontracting firms); Michael W. Mutek, *Implementation of Public-Private Partnering*, 30 PUB. CONT. L.J. 557, 567 (2001) (government contractor); Charles M. O'Neil, *Project Financing 1989: Power Generation, Waste Recovery, and Other Industrial Facilities*, 326 PLI/REAL 299, 303 (1989) (contractor for power plant).

227. *See* Robert E. Scott, *A Theory of Self-Enforcing Indefinite Agreements*, 103 COLUM. L. REV. 1641, 1692-93 (2003).

228. *See generally* Lipshaw, *supra* note 221 (examining contract theory and how lawyers deal with contractual uncertainty through complex business transactions); Scott, *supra* note 227, at 1645 (arguing that "the observed preference for reciprocal fairness offers the best available solution to . . . deliberately incomplete agreements").

229. 2 BRUNER & O'CONNOR, *supra* note 23, §§ 7:8-:12. Of course, some parties may not have the bargaining position to benefit fully from a comprehensive contract approach. *See* Circo, *supra* note 22, at 232.

assessment of project risks and that assign specific activities and responsibilities with considerable detail and precision.

One also must recognize, however, that it is unusually difficult to identify in advance all the factors and conditions that might increase the costs of performance on a particular construction project. There are several reasons for this. Some factors, such as weather, the availability of adequate supplies of labor and materials, and site conditions, often can be estimated based on prior experience, but they cannot be completely managed or controlled.[230] Other factors, such as the extent to which any organizational structure or project delivery system will succeed in coordinating the interdependent activities of multiple participants, may involve too many human and environmental variables to permit a high degree of predictability.[231] Under these circumstances, when an unexpected problem creates unanticipated costs or delays, the participants naturally construe contractual gaps and ambiguities from conflicting perspectives. When the contracts permit the view that the problem did not result from a participant's own failure to perform, that participant will seek relief from other participants. This is the raw material of claims and disputes.

Experience in the construction industry demonstrates the value of careful planning prior to the time a project commences.[232] It is for this reason that a conventional design process involves a series of planning steps, each building on the other. Those steps may begin when an architect, engineer, project manager, or other advisor assists the owner in developing a detailed written description of the owner's objectives for the project, including the business or organizational purposes to be served, physical and functional requirements, and many other details. This description then becomes the basis for conceptual drawings that must be progressively particularized. The process typically includes several opportunities for comments, questions, and suggestions from the appropriate spokespersons on behalf of the owner's management or operating divisions. It also may involve an extensive pre-construction review or a midway-value engineering process exclusively introduced for the purpose of identifying potential problems, cost-saving opportunities, and design alternatives. That process may be led by a member of the design team, a project manager, a representative of a building contractor, an experienced employee or department of the owner, or one or more consultants who will not otherwise be involved in the project. It is also during the planning stages for a project that members and prospective members of the design and construction teams may come together to begin to establish working relationships and efficient processes for the project.

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230. *See* 2 BRUNER & O'CONNOR, *supra* note 23, §§ 7:64-:88.

231. *Id.* § 7:64.

232. *See id.* § 7:23.

The development of a carefully conceived, comprehensive contract structure also should be an important part of the planning process.[233]

It is in part due to the advantages of comprehensive and coordinated contract terms that certain segments of the construction industry have come to rely extensively on form contracts promulgated by professional and trade associations. These considerations also explain why many major developers and companies that regularly have projects under construction create their own standard sets of contract terms and conditions. These forms and contracting conventions, however, also have disadvantages. In some circumstances, they permit the parties to proceed even when they have not adequately assessed and allocated the project risks presented by special circumstances.[234] More pertinent to the issue at hand, such forms and conventions can also make it difficult for participants to perceive and react appropriately to new developments in project delivery systems that do not fall neatly into the existing patterns of contract structures. That seems to be the current situation in at least certain segments of the industry with respect to reliance on shared design.[235]

As discussed in detail in Part II, a project involving shared design creates several unique risk factors and multiple interdependent relationships that affect the distinct and conflicting objectives of different participants.[236] When we consider the potential reach of tort theory as an imposed regime for allocating these risks, we see that shared design increases the potential penalty to the participants for failing to allocate foreseeable risks by contract.[237] For these reasons, effective and efficient risk allocation for shared-design projects requires a comprehensive contract approach.

Participants in a shared-design project could achieve this result by following either one of two contrasting routes. One is to adapt the traditional design-bid-build project delivery system to the special factors involved in shared design. The other is to replace that project delivery system with a new one that brings all, or at least many, of the major project participants affected by shared design under an umbrella contract.

In some instances, the participants will decide to work within the traditional project delivery system, which uses a series of independent,

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233. An important distinction exists between developing the appropriate contract structures and negotiating the actual contracts. In essence, the process of determining the contract structures is the process of defining the project delivery system. This Article advances the argument that shared-design practices signal the need to modify the traditional project delivery system or even to develop a new one.

234. *See* 5 BRUNER & O'CONNOR, *supra* note 23, § 17:18.

235. *See supra* notes 22-30, 85-89 and accompanying text.

236. *See supra* Part II.C.

237. *See supra* Part II.C.

bilateral contracts. They may reach this decision primarily because the extent or nature of the shared design is not significant enough for the project as a whole to justify a radical departure from the traditional structure. Alternatively, they simply may think it impractical to vary conventional contracting practices significantly under the particular circumstances they face. In these cases, the parties to each bilateral contract should negotiate variations on customary contract terms to account for the unique risks that shared design introduces into their particular two-party relationship.

In other situations, the parties may see an opportunity for a project-wide approach. Especially in complex projects, the owner and its design team should consider developing a project design participation agreement that all major participants sign. The project participation agreement could clarify matters of importance to many parties, such as to whom each signing participant owes specific duties, which parties must provide insurance for the protection of other participants, and any limits on warranty, liability, or indemnity obligations.

The next subsection suggests a few contract adjustments that project participants might use in traditional bilateral contracts to allocate some of the special risks associated with shared-design responsibility. Part III.C explains the reasons for a far more comprehensive approach in the form of a multi-party design-participation agreement.

B. *Using Bilateral Contracts to Allocate Shared-Design Liability*

The following discussion draws on the analysis in Part II to explore a few ways in which the participants in the hypothetical project might address shared-design issues in their contracts without completely revamping their contractual arrangements. The intention here is not to recommend specific compromises or complete resolutions, even for the limited circumstances of the hypothetical project. Rather, this brief discussion merely illustrates how the parties might approach questions of design liability for shared design within the traditional design-bid-build project delivery system. Because of the number of variables involved, many alternative compromises on the selected issues raised here are possible. Part II already has provided the parameters for a host of potential compromises that participants in a shared-design project might negotiate in light of the unique circumstances of that project. Rather than attempting to propose model compromise solutions for all of those issues, this Part revisits a few selected issues to illustrate the potential and the limitations of a bilateral contract approach.

Developer—Project Architect Agreement

From the project architect's perspective, it is most important in our hypothetical situation that the agreement expressly exclude the atrium and

security system designs from the architect's contractual scope of services. The parties might easily accomplish this by including in the design services agreement an exclusive list of the included design services that expressly confirms the limited involvement of the architect in the specialty designs. Adopting this approach, the parties might specify that the project architect will provide only preliminary design information for the atrium and limited information relating to the requirements for the security system, while the owner will secure from others the detailed plans and specifications for these aspects of the project. This approach is consistent with that of a popular industry form contract for architectural services, which allows the owner's architect to specify that the contractor must furnish specialty design for which the architect merely provides "appropriate performance and design criteria."[238]

As has already been suggested in Part II, however, it probably should not be acceptable to either the architect or the developer simply to leave matters there.[239] First, one could legitimately inquire what precise information is adequate as the "performance and design criteria."[240] At a minimum, the parties might decide to describe in greater and more objective detail what information and services the project architect will provide relating to the atrium design. Second, legal counsel for both parties should use the contract negotiations to identify and address any inconsistencies in the assumptions and perspectives of their two clients relating to the specialty design. This second point merits a more extensive consideration of a selected issue that serves as an illustration. Perhaps neither party will initially see any reason to address in the contract the circumstances that account for the shared-design features of the project. On closer analysis, however, doing so will serve both parties' interests.

If asked about the point, the developer might indicate a belief that these circumstances reflect that the architect has a much broader responsibility relating to the specialty designs than the architect believes it has assumed. This could be especially true concerning the atrium because under the stated facts the architect recommended to the developer that the specialized nature of atrium design made it desirable to have the steel fabricator serve as a design-build subcontractor. Based on that fact, the developer might be tacitly relying on the architect for two important matters concerning the atrium design, while at the same time the architect might believe it has effectively disclaimed legal responsibility for those matters. The first matter is the decision to separate design responsibilities

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238. American Institute of Architects, Standard Form of Agreement Between Owner and Architect with Standard Form of Architect's Services, AIA Document B141-1997, § 2.6.4.3 (*reprinted in* SWEET, *supra* note 57, app. A, at A-35).

239. *See supra* notes 85-89 and accompanying text.

240. American Institute of Architects, *supra* note 238, at app. A, at A035.

for the atrium from the design responsibility for the rest of the project.[241] The second is the decision to designate a specific steel fabricator to provide that design.[242]

The structural engineering of the steel frame and the qualifications of the firm that provides that engineering are both matters of great importance for the project. Has the architect made a considered, professional judgment, upon which the developer is entitled to rely, that the advantages of the design-build arrangement for the atrium outweigh the advantages of more traditional arrangements in which a single engineer, working as a consultant to the architect, would furnish the structural design for the entire project? Similarly, may the developer assume anything from the fact that the architect's project specifications will identify the particular steel fabricator for the atrium frame?

From the architect's perspective, there are additional reasons why the contract should comprehensively regulate the relationships between the overall project design and the specialty designs. At a minimum, the architect will retain responsibility for coordination of the design of interfaces between the specialty features and the balance of the project. Additionally, the architect should recognize that significant problems with either the atrium or the security system may adversely affect the architect's reputation and likely will lead to claims against the architect. The public and the commercial development community will associate the architect with any serious defects in the project, and if litigation results, the architect will almost certainly become a defendant. For all these reasons, the architect should prefer detailed contractual terms that clarify the architect's review, oversight, and coordination role in relation to the specialty designs.

In light of the potentially applicable contract and tort theories, counsel for both parties should recognize the importance of addressing these matters in the developer-architect agreement. The developer's counsel might consider several contract provisions to confirm and protect the developer's expectations. Perhaps it will be appropriate to include representations from the architect concerning the decisions already made that relate to the atrium design.[243] Additionally (or alternatively), the

241. This is a decision that involves a subtle, but potentially critical, exercise of professional judgment. *See* Fla. Eng'rs Mgmt. Corp. v. Newton, No. 02-2536PL, 2002 WL 31872627, at *10 (Fla. Div. Admin. Hrgs. Dec. 20, 2002) (holding that it was permissible for an engineer to delegate the responsibility for selecting a specialty engineer to a specialty contractor that was not licensed as an engineer).

242. *See, e.g.*, Bd. of Educ. v. URS Co., Inc., No. 64496, 1994 WL 520862, at *1-3 (Ohio Ct. App. Sept. 22, 1994), *aff'd in part and rev'd in part*, 648 N.E.2d 811 (Ohio 1995) (involving a suit brought by a project owner against a project architect who recommended a specialty designer for a planetarium dome design).

243. For example, the developer could ask the architect to represent that the conceptual design

developer's counsel might suggest that the list to be incorporated into the contract describing the scope of the architect's design services should include the activities, already completed, of recommending the design-build subcontract arrangement and selecting the particular steel fabricator for the atrium.[244] The architect's counsel also should prefer to address these subjects contractually, primarily out of concern that they could lead to a viable malpractice claim by the developer if problems later develop with the atrium design.

Perhaps the negotiations will give contractual life to the developer's assumptions, or perhaps they will lead to exculpatory disclosures and disclaimers, or perhaps they will produce some other compromise not immediately apparent to either party. For example, the negotiations might lead to the realization that the architect's conceptual design is so unique that it will be unacceptably expensive or difficult to design and build. Considerations of this sort may produce a significant enhancement of the architect's role relating to the atrium design, along with a corresponding increase in the architect's fee. They might even lead to a revised conceptual design or to a decision to reverse directions and place the atrium design within the scope of the architect's services in the same way that other engineering services are provided by the architect's consultants who are part of the lead design team.

What is important here is not to promote a specific compromise. Rather, these observations lead to the conclusion that, both as a practical matter for the parties' sake and as a policy matter, it will be best if the parties identify and assess the risks involved and then allocate those risks by an advance agreement that takes into account which participant is best able to control the risks. The alternative is to leave any disputes these issues might otherwise produce to be resolved under tort principles.

Both parties (as well as the atrium fabricator) also should want the contract to establish how to coordinate and integrate the atrium design with the overall project design without delay or conflict. A somewhat predictable result of negotiations concerning these matters is that the agreement between the owner and the project architect might establish a procedure by which the construction drawings for the atrium will be

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meets certain functional requirements articulated by the developer and that it is feasible for the fabricator to design and build the atrium.

244. It is not unusual for a design services agreement to be executed by the parties after the design professional has already performed some services. The agreement may replace a letter agreement or other short form or it may represent the first formal evidence of the parties' informal agreement. In these situations, it is common to specify that the contract applies to certain services already begun or completed. In this way, the contract clarifies what services are included in the contract fee, and other contract provisions, such as representations or liability limits, effectively become applicable to those services on a retroactive basis.

submitted to the architect for limited, but adequately defined, purposes that facilitate the interests of all participants in arriving at the final, complete design for the entire project in a timely and efficient manner. The very act of addressing these matters contractually also will encourage the parties to allocate more effectively some of the more foreseeable risks of design interface, omitted activities,[245] delays, conflicts, and errors relating to the atrium design services.

Somewhat different considerations apply with respect to the security system design. In the first place, in this case the decision to exclude the specialty design from the architect's scope of services originates with the county rather than with the architect. Additionally, the design interface issues may be less extensive than those that the atrium design presents. These considerations may make it more likely that the developer-architect agreement will broadly exonerate the architect from any liability for design problems associated with the security system. Or it may lead to a request by the developer that the architect make recommendations on certain aspects of the security system design that are important for the overall project design but that might not otherwise be adequately or timely addressed. If that is the case, then an appropriate increase in the architect's fee probably also will follow.

In any event, the developer-architect agreement should establish a detailed process for coordinating and integrating the security system design into the overall project design. That process may mirror the process relating to the atrium design except that it must reflect that coordination between the architect and the security system designer in this case will be through the developer rather than through the prime contractor.

Developer—Prime Contractor Agreement

As Part II demonstrates, special risk allocation issues arise when the parties divide design responsibility between the owner's lead design team and the construction team.[246] The leading contracting models assume either that the owner will provide the design to the contractor or that a design-builder will assume responsibility for the complete design as well as for construction.[247] In other words, under the two most common project delivery systems, either the construction team has no material responsibility for design or it has all responsibility for design.[248] When the

245. A vexing problem in construction disputes is the failure of the parties to identify and assign responsibility for every activity required to complete the project. *See* 1 BRUNER & O'CONNOR, *supra* note 23, §§ 4:25-:28.

246. *See supra* Part II.D.1-3.

247. *See supra* notes 23-29 and accompanying text.

248. As implied in the discussion that follows in the text, the building process invariably involves the builder at least in limited design activities. *See* 2 BRUNER & O'CONNOR, *supra* note 23, § 7:212.

owner's design team provides the design, the owner impliedly represents to the prime contractor that the design is proper and sufficient for the purposes of the project.[249] The contractor must build the project as required by the design documents, and typically warrants that the construction and materials will be free from defects,[250] but the owner retains the risk of design problems.[251] Although the contractor's responsibility in a traditional project for such matters as shop drawings and proposed substitutions blends construction with design services,[252] the distinction itself remains meaningful for most purposes.[253]

Because in the hypothetical project the contractor, through its subcontractor, will provide the atrium design that will be integrated into the overall design furnished by the owner's design team, design and construction responsibilities are not merely blended—they overlap and intersect at multiple, critical points. The required design integration is arguably more complicated in this project because the developer will furnish most of the project design via the lead architect, but will provide the design for the security system via the separate consultant, while the prime contractor will provide the atrium design through a subcontractor. This arrangement requires coordination involving three distinct design firms that may not necessarily function or react uniformly. For this reason, it is important that the agreement between the prime contractor and the developer adequately establishes a process for submitting information to the developer's design representatives and obtaining design input and decisions binding on the developer.

One of the other critical questions the developer and the prime contractor should address is how the prime contractor's construction warranty should apply with respect to the atrium. If the parties use a customary construction contract and include the atrium design within the scope of the prime contractor's work, they must consider whether or to what extent the contractor's warranty of the "work" should apply to the atrium design. Design contracts alone do not imply any warranty of the design services,[254] and design professionals normally will not agree to

249. *See* United States v. Spearin, 248 U.S. 132, 136-37 (1918).

250. *See* 3 BRUNER & O'CONNOR, *supra* note 23, § 9:53 (discussing express, oral, and implied warranties).

251. *See, e.g.*, Bd. of Educ. of N.Y. v. Mars Assocs., 520 N.Y.S.2d 181, 183 (App. Div. 1987).

252. *See, e.g.*, Great Am. Ins. Co. v. N. Austin Mun. Util. Dist. No. 1, 908 S.W.2d 415, 425 (Tex. 1995) (holding that both the project engineer and the contractor could be liable for an inadequate design detail omitted from the engineer's plans and later defectively supplied in the shop drawing submitted by the contractor and approved by the engineer).

253. An important difference between contemporary shared-design practices and the traditional responsibility of a contractor for limited aspects of design is that shared-design practices often extend to critical design details or to substantially all design for major project features.

254. *See* City of Mounds View v. Walijarvi, 263 N.W.2d 420, 423-25 (Minn. 1978).

express warranties.[255] This is because the prevailing standard for performance of design services assures only a non-negligent design, not an error-free one.[256] The prime contractor (and its surety, if any), therefore, will be reluctant to extend the normal construction contract warranty to the atrium design services. Because in this case the atrium will be provided by the steel fabricator on a design-build basis, the fabricator, as the design-build subcontractor, may be prepared to offer a warranty that extends to the design. For example, if the atrium is based on an established design derived from previous projects, the prime contractor and the fabricator may negotiate a performance or maintenance guarantee based on objective criteria. If so, the prime contractor may propose passing through those assurances from the fabricator to the developer as an exclusive, limited warranty concerning the atrium.

The prime contractor's concerns extend beyond the warranty issue. General contractors are in the business of managing construction risks. They are able to do so profitably because of their expertise in controlling the most vexing construction problems, such as scheduling and coordinating multiple construction activities, evaluating the qualifications and financial status of trade contractors and suppliers, managing project cash flow, overseeing the quality of construction, and many other matters required to complete a project in accordance with plans and specifications and on-time, within budget.[257] The hypothetical prime contractor may not be in a good position to manage or control risks associated with design services for an aspect of the project as significant as the atrium. To do so may require the ability to judge the qualifications of design professionals, to anticipate and address problems unique to the design process, and even to assess the adequacy or quality of plans, calculations, and design judgments. As a result, unless the steel fabricator is financially strong and has a good record for satisfactory performance as a design-build subcontractor, the prime contractor will certainly attempt to tailor the contractual provisions to deal with the atrium as a distinct category within the contractual scope of work. For example, the prime contractor may be willing to accept responsibility to coordinate and manage the fabricator's construction activities but not to accept responsibility for the fabricator's failure to perform.

The atrium design also presents other challenges for the developer in relation to the prime contract. The most fundamental question is whether the arrangement provides adequate remedies for the developer if there are problems with the atrium design. Because the developer is not a party to

255. *See* 5 BRUNER & O'CONNOR, *supra* note 23, § 17:24.

256. *See* Flatt, *supra* note 59, at 619-21.

257. *See* 2 BRUNER & O'CONNOR, *supra* note 23, §§ 7:1-:13 (exploring risk management and risk analysis strategies in construction projects).

a contract with the steel fabricator who will design the atrium, contract remedies in favor of the developer against the steel fabricator require special attention.[258] A court would be reluctant to imply third-party beneficiary rights into the atrium subcontract absent an express provision in the subcontract that establishes that the prime contractor and the steel fabricator intended the developer to have remedies for breach of the fabricator's design services obligations.[259] Furthermore, even if the fabricator's engineering staff commits professional malpractice, the economic loss rule may deny the developer a tort remedy.[260] If the contract limits the prime contractor's responsibility or liability with respect to design defects, the developer must negotiate for direct rights against the steel fabricator.[261] Even if the prime contractor agrees to warrant the specialty design as part of the construction "work," the developer should consider whether the contractor's insurance and any surety bond adequately cover that obligation.[262]

Assuming that the prime contractor successfully negotiates to exclude the atrium design from the normal warranty of the work, the developer still may logically expect the prime contractor to take responsibility for the timely completion of the atrium design documents. Because the prime contractor will control payments to the steel fabricator, it may be reasonable for the prime contractor to assume certain basic responsibilities for the timely completion of all obligations of the fabricator under the subcontract, including design activities.[263]

Based on these considerations, the prime contractor's counsel might initially propose to the developer's counsel that the design services for the atrium should be completely excluded from the contractor's warranty,[264] that the developer should acknowledge that the prime contractor is not qualified or licensed to provide professional engineering services, and that

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258. *See* Iowa Power & Light Co. v. Abild Constr. Co., 144 N.W.2d 303, 311-13 (Iowa 1966).

259. *See* Peter Kiewit Sons' Co. v. Iowa S. Utils. Co., 355 F. Supp. 376, 391-93 (S.D. Iowa 1973).

260. *See* Sidney R. Barrett, Jr., *Recovery of Economic Loss in Tort for Construction Defects: A Critical Analysis*, 40 S.C. L. REV. 891, 927 (1989).

261. *See* Midwest Dredging Co. v. McAninch Corp., 424 N.W.2d 216, 224-25 (Iowa 1988) (recognizing that what the contract says is the best evidence of whether the contracting parties intended to create third-party beneficiary rights).

262. *See supra* Part II.D.7-8.

263. If the prime contractor had independently selected the steel fabricator, a court might hold that the prime contractor implicitly represented to the developer that the fabricator was qualified to perform the necessary design services. *Cf.* RESTATEMENT (SECOND) OF TORTS § 411 cmt. b (1965). But the hypothetical posits that the developer's architect designated the steel fabricator.

264. The contractor's counsel would not need to propose such a provision concerning the security system design because, by furnishing that design through its security consultant, the developer impliedly represents to the contractor that the security system design is proper and sufficient. *Cf.* United States v. Spearin, 248 U.S. 132, 136 (1918).

the atrium steel fabricator should be exclusively responsible for the atrium design. The owner's counsel might respond with a proposal to require the contractor to retain responsibility to manage and coordinate completion of the atrium design in a timely manner and to secure third-party beneficiary status for the owner against the steel fabricator in the event of design errors and omissions. Under these circumstances it also would be appropriate for the developer-prime contractor agreement to include terms requiring the prime contractor to assure that all engineering documents relating to the atrium will be prepared and sealed by a properly licensed engineer, and it also should include detailed requirements concerning the fabricator's professional liability insurance. Both parties' interests suggest the need for a design approval process that is consistent with the process established under the developer-architect agreement. Finally, the prime contractor might assign to the developer any specific assurances or remedies relating to the atrium design that the subcontract establishes in the prime contractor's favor.[265]

The discussions of the developer-architect and the developer-prime contractor agreements suggest both the possibilities and the limitations inherent in attempting to address shared-design issues through a series of traditional bilateral agreements. A few additional notes are in order about the two other key contracts involved in the shared-design features of the hypothetical project.

Developer—Security Consultant Agreement

One of the notable features of the hypothetical project is that the developer will enter into two separate design services agreements in addition to assigning the atrium design to the prime contractor's construction team. In order to avoid conflicts and inconsistent design directives, it will be important to establish a process to coordinate the security consultant's design services with the overall project design by the lead design team. Presumably, this will require that the developer-security consultant agreement adopt submittal and review processes consistent with those included in the developer-prime contractor agreement.

The security consultant also may be concerned about the extent to which the lead architect's role could overshadow the consultant's ability to participate sufficiently in the process by which the security system design is incorporated into the project design and then is implemented by the prime contractor. This may lead to some special contract provisions. For example, the contract might provide that certain design details, construction submissions, and construction activities will require the consultant's review or approval even though the architect will play the main role in contract administration on behalf of the developer for the

265. *See infra* notes 269-74 and accompanying text.

overall project. The developer also will probably need to coordinate the consultant's agreement with some of the developer's obligations to the county. This may mean, for example, that the security consultant should acknowledge in its agreement with the developer that the county is a third-party beneficiary of the consultant's services.

Prime Contractor-Atrium Steel Fabricator Subcontract

The subcontract between the prime contractor and the steel fabricator should conform to the relevant provisions of the agreements between the developer and the architect, the developer and the contractor, and the developer and the security consultant. This means that all four contracts should establish consistent and complementary procedures for design documentation to be reviewed by all affected parties, revised to respond appropriately to comments and questions raised by those parties, and finalized and incorporated into the project design in a coordinated fashion.

Some special provisions may be necessary to assure the steel fabricator that the architect (and possibly the security consultant as well) will respond in a timely and adequate manner to requests for clarification or decisions concerning the project design that may affect the atrium.[266] Additionally, the subcontract must incorporate and pass through to the steel fabricator any commitments that the prime contractor made to the developer concerning the performance of the design services, third-party remedies to be available to the developer, and professional liability insurance to be maintained by the steel fabricator.

The subcontract also will define the relationship between the parties concerning design activities. If the design services required of the steel fabricator are routine in the industry, then the relationship may follow the typical contractor-subcontractor pattern in which the subcontractor simply agrees to perform the subcontracted work in accordance with the prime contract. This may be the case, for example, if the atrium is essentially a standard product that need only be modified in limited respects to meet special criteria provided by the project architect. If that is the situation, the prime contractor may be able to manage the steel fabricator's activities in the same manner that it manages the activities of other vendors who perform ancillary installation obligations.[267] As the earlier discussion shows, however, the particular circumstances involved may be sufficiently unique that the prime contractor will be neither qualified to manage the design activities involved nor willing to incur the full liability to the

266. *See* 5 BRUNER & O'CONNOR, *supra* note 23, § 17:9.

267. A common example of this occurs when a design-build subcontractor furnishes and installs the heating, ventilating, air conditioning, and cooling system. *See* 2 BRUNER & O'CONNOR, *supra* note 23, § 5:79. Note, however, that in the hypothetical situation, the prime contractor does not have the level of influence and control often enjoyed by a prime contractor who has independently selected the subcontractor in the first place.

developer for those activities.[268]

The prime contractor and the steel fabricator may consider several alternatives to redefine their contractual arrangement in relation to the atrium design. The most direct and comprehensive approach would be for the prime contractor to secure from the steel fabricator an express design warranty of the atrium design that runs in favor of the developer as well as the prime contractor.[269] That may be unacceptable, however, to the steel fabricator, who may adhere to the customary view of designers that design liability should be based on professional negligence and not warranty. The steel fabricator may especially object to an express design warranty if it is retaining an outside engineering firm to furnish the design because in that case the fabricator may be unable to pass the warranty obligation on to the engineering firm. The steel fabricator may be willing to provide an alternative form of assurance of a more specific and limited nature, such as a warranty that the atrium will remain watertight for a specified period,[270] or it may offer an objective performance guarantee of its work. A performance guarantee may be especially appropriate for certain specialty components or systems.[271] In the case of the atrium, for example, a performance guarantee might provide that the welds must meet certain specifications when tested in accordance with an agreed procedure.[272] The prime contractor, therefore, may wish to explore with the steel fabricator whether a performance test for the atrium frame system or some other form of special assurance is feasible.[273] If, at the time the prime contractor is negotiating the prime contract, it can anticipate what design warranty or other assurance the atrium subcontract will provide, then, as previously suggested, the prime contractor might propose to the developer that the prime contractor's sole responsibility for the atrium design will be to assign to the developer the fabricator's extended warranty, performance guarantee, or other special assurance.[274]

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268. *See supra* Part II.D.5.

269. To the extent the fabricator is a design-builder for the atrium, even if the subcontract does not expressly warrant the design, a court may recognize an implied warranty of design as well as construction. *See* Prier v. Refrigeration Eng'g Co., 442 P.2d 621, 624 (Wash. 1968). Additionally, if a court views the steel fabricator as a product manufacturer for product liability purposes, the fabricator may incur strict product liability. *See* Commercial Distribution Ctr., Inc. v. St. Regis Paper Co., 689 S.W.2d 664, 670 (Mo. Ct. App. 1985).

270. *See, e.g.*, Beckstead v. Deseret Roofing Co., 831 P.2d 130, 132 (Utah Ct. App. 1992).

271. *See* 2 BRUNER & O'CONNOR, *supra* note 23, § 7:125.

272. *See, e.g.*, Petrocon Eng'g, Inc. v. MAC Equip., Inc., 199 F. Supp. 2d 599, 601, 603 (E.D. Tex. 2002).

273. Especially because the owner's architect provided certain design data or criteria for the atrium, any performance guarantee by the atrium subcontractor should be stated in unambiguous terms. *Cf.* Kurland v. United Pac. Ins. Co., 59 Cal. Rptr. 258, 261 (Ct. App. 1967).

274. *See* 6 BRUNER & O'CONNOR, *supra* note 23, § 19:52.57; *cf.* Holden Farms, Inc. v. Hog

C. *A Proposal for Multi-Party Project Design Agreements*

Part III.B demonstrates that participants in a shared-design project can resolve some important issues by making significant adjustments to the bilateral contracts called for by the traditional project delivery system. In some cases, however, a project-wide solution may require a project-wide approach that brings the design parties and other affected participants under an umbrella agreement and that deals comprehensively and exclusively with the shared-design responsibilities.

Before hardened negotiators protest that this suggestion smacks of an overly optimistic expectation that multiple parties can strike a balance that will serve competing interests, they should consider again what the alternative may be to a comprehensive contract solution to the shared-design problem.[275] Those who fail to identify and allocate shared-design liability by contract may find the common law standing by to allocate those risks for them after the fact. An aggrieved participant, resorting to tort law, is free to seek a remedy based on broad social policies rather than on the commercial factors that actually motivated the parties when they voluntarily entered into the commercial relationships involved. Because tort law is dynamic, it is impossible to predict what judicial attitudes may emerge in response to novel claims in the untested world of shared design.

To bring the potential significance of a multi-party contract approach into sharper focus, let us revisit one of the most difficult legal issues that may arise in shared-design projects. Should the law provide a remedy for purely economic loss suffered by one participant due to the fault of another participant if no contract exists between the offender and the injured party? This, as we have already noted, is a situation addressed—with much inconsistency and disagreement—when courts consider the economic loss rule in tort cases.[276] Third-party beneficiary provisions in separate bilateral arrangements offer a partial solution to the problem.[277] But separate bilateral contracts cannot effectively regulate, limit, or deny the remedies

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Slat, Inc., 347 F.3d 1055, 1060 & n.1 (8th Cir. 2003) (finding that the construction contract limited the duration of the contractor's warranty of manufactured materials to the period warranted by the manufacturer).

275. While the idea of a project-wide agreement to govern the relationships created by shared design may seem radical, consider as an analogy the firmly established role of "general conditions" that are made a part of the owner-prime contractor agreement and then incorporated into each subcontract for construction work. Indeed, in a situation in which an owner hires multiple prime contractors for distinct aspects of a project, the American Institute of Architects' form of general conditions indirectly attempts to regulate the relationships among the separate contractors in a way that is somewhat analogous to the proposed use of a multi-party design agreement. *See* American Institute of Architects, *supra* note 86, at app. C, at C-2.

276. *See supra* notes 72-76 and accompanying text.

277. *Cf.* 5 BRUNER & O'CONNOR, *supra* note 23, § 17:30.

a court might award to an injured participant who is not a party to the agreement. In other words, a bilateral contract can confer legal rights on a third party, but it cannot bind a non-consenting third party to the terms of the contract.

In appropriate situations, a project-wide design participation agreement might significantly improve the picture. Because each affected participant would join in a common agreement, the rights of all participants could be made subject to a coherent set of limitations, procedures, and conditions that address considerations uniquely important when design responsibilities are shared. A project design agreement also could advance other objectives that require project-wide solutions. For example, a multi-party contract will assure that fully consistent principles and procedures apply to all of the interdependent relationships involved; it also may enhance communications, reduce misunderstandings, foster collaboration, help bring hidden problems to light, and facilitate project-wide professional liability coverage and other creative risk management techniques.

In fact, project design agreements might routinely enhance the project delivery system for projects that include significant shared-design responsibilities. They may prove especially valuable in more complex situations. This would include projects in which the owner as well as the prime contractor retains multiple designers and those in which multiple subcontractors may retain outside design consultants. Ideally, the owner's legal counsel would prepare a discussion draft of the agreement in the early stages of the planning process, probably in consultation with the owner's architect or project manager, and possibly with the assistance of one or more other advisors. While each project would involve unique considerations, a common scheme might include several key features.

- Bid packages, requests for proposals, and other pre-contract information could include the form of the agreement and could designate those participants who should join in the agreement.
- For private projects, the prime contractor and other key design parties might be given the opportunity to propose changes before any party signs the agreement, but execution of the agreement in the form finally agreed upon could be made a condition precedent to the effectiveness of each participant's separate contract for services. For public works projects, however, competitive bidding standards might restrict any negotiations concerning the terms of the agreement once the bid package has been issued.[278]
- The agreement could include or incorporate preliminary design information prepared by the project architect or others, including

278. Cf. Hoiten v. City of Canistota, 579 N.W.2d 12, 14, 16-17 (S.D. 1998).

design criteria and any performance standards for each specialty design.

- It also could include a comprehensive submittal and review process the parties must follow and a detailed matrix of design activities that specifies who is responsible to prepare, review, comment on, and finalize specified designs and whether anyone has the right but not the duty to review certain design details. It also might address what consequences flow from a party's review or failure to review submittals.
- The agreement would include appropriate representations, acknowledgments, and agreements relating to matters of common interest to the parties. For example:
  - The project architect's representations that certain preliminary design information contained or incorporated in the agreement conforms to applicable professional standards;
  - Acknowledgments by appropriate parties that they have reviewed and approved the division of design responsibility and the coordination procedures reflected in the agreement and that they agree that these matters are consistent with sound design and construction practices;
  - The prime contractor's representations that it has reviewed the preliminary design information and the design matrix and has determined that they are consistent with sound construction and scheduling practices and consistent with the construction schedule for the project;
  - Each specialty designer's representation that it has reviewed the preliminary design information and the design matrix and has determined that they provide an appropriate basis upon which the specialty designer may perform its design responsibilities;
  - Representations concerning the licensing status of each participant, and each design party's agreement that all its professional design activities will be performed by or under the direction of a properly licensed professional and that the appropriately licensed professional will seal all its plans and other design materials that are required to be sealed in accordance with applicable legal requirements and industry standards;
  - Each specialty designer's acknowledgment that the design submittal process provides an appropriate procedure and adequate time for the specialty designer to perform its design responsibilities; and
  - Each participant's acknowledgment that no participant has made any representations to the other participants relating to the project except for the express representations contained in the

project design agreement, and the further acknowledgment by each participant that it has no right to rely on or enforce any representations, agreements, or other provisions relating to the project under any agreement to which it is not a party.[279]

- The agreement also should specify insurance and bonding requirements, including any requirements for the parties to participate in any controlled insurance programs or other project-based risk management programs.
- A force majeure provision may be included to govern delays in the design submittal process.
- Appropriate provisions concerning enforcement and remedial matters may cover reciprocal indemnity obligations, waivers for insurance subrogation purposes, limitations on the liability of participants to each other, choice of law, forum selection, and dispute resolution.
- Other miscellaneous provisions might cover important or technical definitions, attorneys' fees, and other litigation or dispute resolution expenses, and other matters affecting contract administration or interpretation.

Depending on the circumstances, many other provisions may be appropriate. Although every project will present some unique issues that might be addressed in the project design agreement, there are a few matters of limited application that are worthwhile to consider in this overview.

- If several participants may become parties to the agreement after it is executed by an initial group of participants, the agreement should designate the design roles of those who will join later, and it should include procedures by which the parties acknowledge that the agreement constitutes a legally enforceable agreement among all those who sign. This may be applicable, for example, when the owner, the project architect, and the prime contractor sign the agreement initially, and required subcontractors join as the prime contractor awards subcontracts.
- An agreement might contemplate that some of the design participants may be given the option whether to sign the agreement or to sign a separate waiver of all benefits of the agreement. This

279. No-reliance clauses often prove valuable in litigation even though they are frequently challenged on the basis that they are at odds with the actual conduct of the parties. *See* 8 MARTIN D. FERN & DANIELLE F. FERN, WARREN'S FORMS OF AGREEMENTS § 101.2 (2005) (discussing the desirability of including an integration clause in a business agreement); *see also* Vigortone AG Prods., Inc. v. PM AG Prods., Inc., 316 F.3d 641, 644-45 (7th Cir. 2002) (suggesting that a no-reliance clause, in contrast to a simple integration clause, should be effective between commercial parties).

could be a useful device, for example, to induce prospective parties to join in the agreement if it includes attractive contractual limits on liability. It also may be a necessary option when the owner anticipates that a dominant party may be unwilling to join.

- Some situations may require a procedure by which modifications to the agreement may become effective and binding on all parties if the proposed modifications meet predetermined criteria, receive the written approval of key participants, such as the owner, the architect, and the prime contractor, and are subject to protest or dispute resolution procedures.

A project design agreement can serve a purpose similar to that served by a participation agreement in a multi-party financing transaction or other complex business transaction.[280] The agreement creates a contractual relationship among many parties for the limited purpose of issues of common interest, but it does not replace the bilateral contracts that pairs of participants will enter into separately to define their other rights and obligations. Although this article has examined the idea of a multi-party design agreement as an alternative to the design-bid-build project delivery system, the concept also would have merit in other shared-design situations, and even in projects that do not involve shared design but that create other forms of complex, interdependent relationships among construction participants. These would include situations in which the owner manages the project and directly retains multiple designers or contractors. Design-builders also may find the concept helpful in coordinating and managing the activities of multiple design-build subcontractors.

IV. CONCLUSION

Although the construction industry has only begun to absorb the unique contract attributes of shared-design projects, it has the innate ability to do so efficiently and effectively. The industry is notably adept at developing project delivery systems and contracting structures that respond to a constantly changing environment and that permit each participant a commercially reasonable opportunity to protect its own legitimate interests through contract negotiations and risk management techniques. Design and construction contracting practices must adapt to shared design in ways that achieve the efficient and sound allocation of the design liability risks involved. Inevitably, new contracting patterns must emerge that better serve the interests of those who participate in shared-design projects. This natural evolutionary process should give rise to refinements in contractual

280. *See, e.g.*, Charles J. Hamilton, Jr. & Anne E. Griffith, *Subordinate Mortgages and Other Participation Agreements*, 478 PLI/REAL 975, 986 (2001).

arrangements, new risk management techniques, and other developments that will serve the interests of the parties and the industry. These circumstances may eventually give life to significant variations on established project delivery systems.