CONSTRUCTION BUSINESS HANDBOOK

Chapter 4:
INSURANCE COVERAGE FOR CONSTRUCTION PROJECTS

Construction Law Library

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CHAPTER 4
INSURANCE COVERAGE FOR CONSTRUCTION PROJECTS

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§ 4.01 IDENTIFYING AND ALLOCATING CONSTRUCTION

[A] Risk Identification

The traditional approach to project risk management has been for each party to send its representative to the negotiating table with their sole purpose focused on looking out for their client's interest. A closer examination of the project's cost of risk can often demonstrate that this traditional approach can lengthen the contract negotiation process, increase the perceived risk of individual project members and increase the total cost of risk of a single project. Adding to the premise that the traditional approach to project risk management may increase the project's cost of risk is the fact that the construction industry has become much more complex. Contract delivery methods have changed, bringing project participants into a greater number of project issues.

Risk identification is a very important process within the project risk management plan. There are proven methods that can help a project risk management team to identify the various risks associated with a particular project. A risk assessment process can help install the discipline at the project management level necessary to gain a thorough understanding of the many risks that a single project can generate and the factors that may affect the scope of those risks.

For instance, the likelihood of particular risks occurring on a project can be increased or decreased by the following factors:

- **Project Type and Site**—risks inherent to project type (such as security systems for prisons, environmental for tank farms, and weather for projects in cold or rainy climates);

- **Project** Participants—experience of key team members and leadership;

- **Budget and Financing**—reliability of cost estimates; guarantees, non-recourse debt; amount and adequacy of contingency;

- **Scheduling**—realistic and flexible, with interim mi

- **Project Delivery Method**—design-bid-build, fast-track, design-build, construction management, privatized or turnkey projects;

- **Legal**—statutes or case law relating to indemnification, limits on time to file legal actions, insurability of punitive damages, negligence;

- **Political**—bureaucratic delays, changes in leadership, regulatory authority for life safety, public opposition to project labor issues.

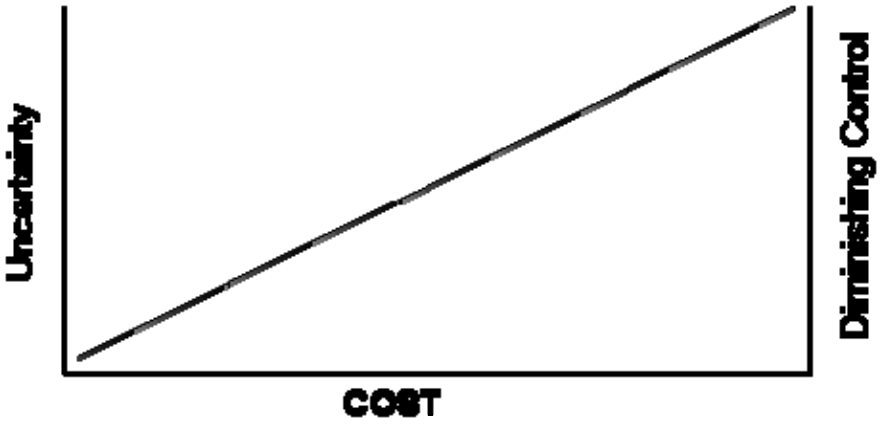
[B] Risk Allocation

After all project risks have been properly identified, they must be allocated correctly and equitably between the parties to the contract. An important consideration to all parties is the cost of such allocation. The parties responsible must be aware of the risk inherent in the project, and should carefully allocate that risk by evaluating the cost impact of protecting against project risks compared to the completed value of the project.

The first step in risk allocation is identification of the parties responsible for sharing the cost of project risk. Some parties (i.e., developer, lender, engineer, contractor, or operator) have a direct risk associated with the completion of the project; and others (i.e., equipment suppliers, power sources, transportation companies, other investors, etc.) share risks that are more indirect in nature. All parties at interest can become critical input sources throughout the risk evaluation, allocation and financing process. A sample listing of parties to consider is developers, lenders, engineers, contractors, landowners, equities, public entities, operators, end users, equipment suppliers, and transportation companies.

Ideally, all parties to the construction contract and not just the owner and principal contractor should be involved in making risk allocation decisions. Otherwise, misallocation and inaccurate perceptions of risks will result in higher project costs, including bid contingencies; administrative time and legal fees to resolve disputes after construction is complete; property damage or bodily injury; and lost revenue and increased expense from delays in project completion.

Always take into consideration the premise that cost generally increases with uncertainty, and uncertainty increases with the decrease of control. Remember the rule—match risk allocation with the ability to control. Consider the following chart in analyzing the allocation and risk financing review process:



* Match risk allocation to the party in best position to control the risk.

With diminishing control of the risk, a party's uncertainty will increase. The combination of limited control and increased uncertainty can lead to an even larger increase in project cost. Contingencies (those costs that are built into the project cost to cover unknown circumstances) increase and/or there is a movement to finance more risk than what a thorough project risk management plan would suggest is prudent.

Risk transfer is the means for shifting (or sharing) the financial obligation of certain risks among various project participants—through non-insurance transfers (hold harmless or indemnity clauses) or commercial insurance and bonds. Risk transfers are accomplished using specific contract provisions. Used together, hold harmless/indemnity clauses, insurance, and bonds can protect the contract parties from catastrophic financial loss.

Of course, there are limits to the extent of risk that can be covered by any hold harmless clause or insurance program for a project. The following is a list of common project risks that should be considered in developing a project risk management plan:

- Injury to contractor's employees;
- Injury to subcontractor's employees;
- Injury to general public;
- Physical damage to project during construction;
- Physical damage to project after construction;
- 'Physical damage to adjacent property;
- Passive damage to project during construction (loss of use);
- Passive damage to project after construction;
- Physical damage to contractor's equipment;
- Damage caused by excusable delay;
- Damage caused by non-excusable delay;
- Damage caused by faulty workmanship;
- Damage caused by hazardous materials including pollution and asbestos

§ 4.02 INSURANCE COVERAGE FOR TRADITIONAL CONSTRUCTION RISKS

[A] Negotiating and Identifying Construction Risks

One of the most important aspects of a construction risk management program is developing a balanced approach to risk allocation. In negotiating a contract, contractors need to be aware of certain clauses that can have a major impact on their ability to control and manage risk. From a risk management perspective, successful contract negotiations should meet the following criteria:

- A conscious decision is made at the outset of the negotiating process to allocate risk to the party in the best position to control and manage the risk.
- Parties must be educated about potentially high or unusual risk and, if those risks are accepted, an additional fee should be charged for the increased risk exposure.
- Contractual provisions allocating risk (especially hold harmless or indemnity clauses) must be consistent with local statutes or legal precedent.
- Insurance and other financial support for the allocated risks must be in place when the project begins and before a loss occurs.
- The construction contract should clearly express the intent of all parties regarding the sharing and financing of project risks.
- Avoid clauses that may increase risk to a point where it may become impossible to insure against the risk.

[B] Indemnification

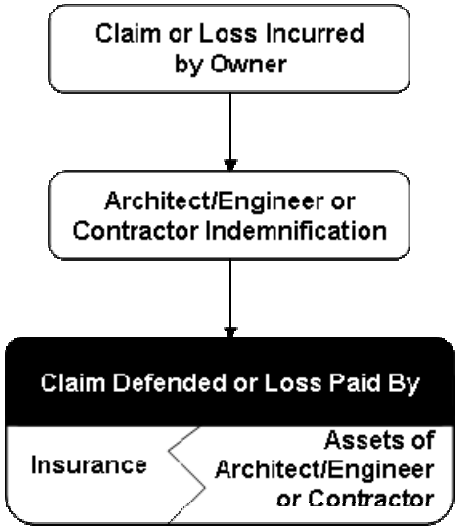
To indemnify means to assume a responsibility that would otherwise belong to another. When one party (the indemnitor, usually the architect/engineer or contractor) agrees to indemnify another (the indemnitee, usually the owner), the indemnitor becomes, within the scope of the indemnity provision, responsible for the other party's losses. The key to an effective indemnification provision is the ability of the indemnitor to stand behind the obligation—based on its own financial capacity or that of its insurer, as illustrated below.

Indemnity clauses are normally classified according to the extent of liability assumed by the indemnitor—ranging from the limited form to the broad form. The risk transferred by the clause determines its classification and the cost of insurance (if available) to cover obligations assumed by the indemnitor under that clause.

[1] Indemnification Forms

[a] Limited Forms

Under the limited form, the indemnitor (contractor) agrees to assume liability, but only to the extent of its own fault. This form, sometimes called the comparative fault form, is generally



insurable for bodily injury or property damage. A sample, limited form of indemnity may read as follows:

> *Contractor agrees to defend, indemnify, and hold harmless the owner against claims, damages, bodily injury, or property damage arising out of the contractor's work to the extent caused by the negligent act or omission of the contractor and the contractor's agents and employees.*

[b] Intermediate Form

The second type of indemnification clause—and the most common—is the intermediate form. It involves the assumption of all liability arising from contract performance, excluding only the sole negligence of the indemnitee (owner). The American Institute of Architects sample clause reads as follows:

> *To the fullest extent permitted by law, the contractor will defend, indemnify, and hold harmless the owner and architect and their agents and employees from and against all claims, damages, losses, and expenses including but not limited to attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss, or expense 1) is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property (other than the work itself) including the resulting loss of use, and 2) is caused in whole or in part by any negligent act or omission of the contractor; any subcontractor;*

> *anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified under this contract.*[1]

[c] Broad Form

Under a broad for indemnification clause, the indemnitor (contractor) assumes an unqualified obligation to hold the indemnitee (owner) harmless from any and all liabilities arising from the project, regardless of which party was actually at fault. Even if the damage, injury, or claim is due to the sole negligence of the owner, the contractor (as indemnitor) must respond to the loss. A broad form hold harmless provision that transfers the entire risk of loss from the indemnitee to the indemnitor might read as follows:

> *The contractor will defend, indemnify, and hold harmless the owner and all the owner's agents and employees from and against all claims, damages, losses, and expenses, including attorney's fees, arising out of or resulting from the performance of the contractor's work, whether caused in whole or in part by a party indemnified under this contract.*

[2] Liability Implications

The traditional rationale for imposing an intermediate form of indemnification on a contractor is that the cost of liability is best placed with the contractor because it has the greatest ability to control the risk and to prevent loss at the project site. There are several arguments a contractor can make in opposition to an indemnity clause naming the contractor as an indemnitor:

- The clause violates a state anti-indemnity statute;
- There is no economic justification for the party's assumption of all or a portion of the owner's liability;
- The clause is not fully insurable;
- The clause will lead to future legal disputes.

The case books are full to overflowing with numerous reports of judicial decisions that address disputes regarding the language used by experienced drafters in negotiating contractual indemnity clauses. The AIA has published sample indemnity clauses, such as the intermediate clause reproduced above; but the language used by contract drafters is subject to an infinite variety of wording designed to address the competing goals of contractors and owners. Typically, the project owner desires to obtain the broadest possible protection from the contractor against any liability that could create "extra" costs to complete a, project. From the owner's perspective, an indemnity clause should protect

[1] AIA Document A201, General Conditions of the Contract for Construction, 1976 edition.

against any loss arising from the project, including claims for damages by employees of contractors, materialmen, and other invitees who are injured on the project premises, even if as a result of the fault of the owner.[2] On the other hand, contractors are reluctant to extend protections to a project owner unless the liability claim is based upon the owner's vicarious responsibility for the negligence of the contractor. As illustrated by the clauses quoted above, contracts providing indemnity for construction-related claims almost always require the injury or damage to "arise out of the contractor's work, followed by language that either assigns responsibility based on proportionate fault ("to the extent caused by") or irrespective of fault (caused "in whole or in part" by) of the indemnified party, usually the owner.

There are two general lines of legal authority interpreting construction indemnity clauses. In "express negligence" jurisdictions, courts will not construe a contractual indemnity clause to cover the negligence of the project owner (the indemnified party) unless the clause expressly refers to the negligence of the project owner. As succinctly stated by the Supreme Court of Texas in adopting the "express negligence" rule:

> As we have moved closer to the express negligence doctrine, the scriveners of indemnity agreements have devised novel ways of writing provisions which fail to expressly state the true intent of those provisions. The intent of the scriveners is to indemnify the indemnitee for its negligence, yet be just ambiguous enough to conceal that intent from the indemnitor. The result has been a plethora of law suits to construe those ambiguous contracts. We hold the better policy is to cut through the ambiguity of those provisions and adopt the express negligence doctrine.[3]

In other jurisdictions, express reference to the negligence of the indemnified party is not necessary to shift responsibility to the contractor, so long as all of the facts and circumstances suggest that the parties intended the contractor to assume responsibility for the owner's fault. The "arising out of language of an indemnity contract is not a significant limitation on the scope of a contractor's responsibility because in most jurisdictions, such language is construed broadly and only requires that the person injured have some connection with the work of the contractor or subcontractor. In many cases the mere presence of the injured party on the premises where the work is undertaken is

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[2] Normally, "work-related" injuries are covered exclusively by the workers' compensation laws of the jurisdiction where the work is undertaken. While many jurisdictions have "statutory employer" provisions that immunize a general contractor or owner from most work-related injury claims brought by injured employees of a contractor or subcontractor, these statutes usually are narrowly construed; they *are* subject to numerous exceptions; and they may not protect an owner against claims arising out of the owner's negligence. *See* Arthur Larson, 4 Larson's Workers' Compensation Law § 70.01, *et seq.* (May 2000). In many jurisdictions, an owner or contractor cannot take advantage of the immunity provided by the statutory employer concept absent a contractual provision requiring each subcontractor to carry and maintain appropriate workers' compensation coverage. Thus, workers' compensation coverage should be specified in every construction contract. Because issues related to such coverage are highly specialized and are addressed in numerous other texts, a more detailed discussion of construction-related workers' compensation is beyond the scope of this guide.

[3] Ethyl Corp. v. Daniel Constr. Co., 725 S.W.2d 705, 707-08 (Tex. 1987).

sufficient to trigger the indemnity clause.[4] However, even in jurisdictions that have not clearly adopted the "express negligence" rule, there may be statutory prohibitions that would bar an owner from shifting the risk of liability for its own fault to the contractor. These so called "anti-indemnity statutes," which often relate specifically to construction projects, usually bar claims by an owner seeking indemnity from a contractor for claims arising out of the owner's sole negligence.[5] Indeed, in some jurisdictions, such statutes may prohibit or significantly restrict indemnity even when the owner is only partially at fault.[6]

Litigation regarding the meaning of contractual indemnity provisions can be protracted and complex, and often leads to uncertain outcomes even though courts tend to construe such contracts "as a matter of law" rather than allowing a jury to decide whether or not a contractual indemnity obligation has been triggered by the underlying facts. For instance, in a recent decision by the United States Court of Appeals for the Sixth Circuit, the parties litigated for several years regarding the meaning of a hybrid form of indemnity clause that included the "to the extent" language used in the limited form of indemnity and also included the "in whole or in part" language commonly used in the broad form of indemnity clause.

In *Olin Corp. v. Yeargin, Inc.*,[7] the owner argued that it should be entitled to 100% indemnity for all losses incurred in settling toxic tort claims brought by the employees of a contractor hired to perform major maintenance work in the mercury cell room of a plant located in Tennessee. The owner argued that the "in whole or in part" language used in the contract should be interpreted to require full indemnity if any portion of the liability it incurred could be attributed to the negligence of the contractor, who, along with the owner, had been cited for OSHA violations at the work site. However, because the contractual language also contained "to the extent" wording that referred only to the negligence of the contractor and did not mention indemnity for the negligence of the owner, the Court of Appeals affirmed the trial court's decision to apply an "express negligence" test to the clause, thereby barring the owner's claim for recovery of the costs of settling claims brought by the injured employees and their spouses arising out of the owner's negligence.

The expense incurred during protracted litigation regarding the meaning of contractual indemnity clauses and the legal uncertainty regarding the extent to which the risk of liability has been shifted from one party to another may be avoided or significantly reduced by allocating the indemnified risk to insurance, This allocation can be accomplished by commercial general liability programs, which typically protect

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[4] *See, e.g.,* Cirrito v. Turner Constr. Co., 189 Conn. 701, 458 A.2d 678 (1983) ("caused by, relating from, arising out of or occurring in connection with"); Perkins v. Rubicon, Inc., 563 So. 2d 258 (La. 1990) ("arising out of'); O'Connor v. Serge Elevator Co., 58 N.Y.2d 655, 458 N.Y.S.2d 518, 444 N.E.2d 982 (1982) ("arising out of'). *See also* note 22 *infra.*

[5] *See, e.g.,* 0.C.G.A. § 13-8-2 (2000); Md. Cts. & Jud. Proc. Code Ann. § 5-401 (2000); Mich. Comp. Laws § 691.991 (2000); N.J. Stat. Ann. § 2A:40A-1 (West 2001); Tenn. Code Ann. § 62-6123 (2001).

[6] Del. Code Ann., tit. 6, § 2704; Miss. Code Ann. § 31-5-41 (2000); Neb. Rev. Stat. § 25-21, 187 (2000).

[7] 146 F.3d 398 (6th Cir. 1998).

against risks assumed by the named insured in an "insured contract," as well as by project-specific builders' risk coverages, owner controlled insurance programs ("OCIPs") or other forms of coverages that can and should be specified in the construction contract. Such coverage may be as broad or perhaps even broader than the scope of the contractual indemnity obligation assumed by the contractor. An appropriately designed insurance program can be a valuable supplement to, if not a viable substitute for a potentially controversial, risk-shifting indemnity clause.[8]

[C] Review of Principal Project Coverages

[1] Commercial General Liability Coverage

Commercial General Liability (CGL) insurance provides coverage for legal liability, as well as defense costs, if an alleged lawsuit covered under the policy arises out of an accidental occurrence of bodily injury or property damage during the performance of the work. In addition to Bodily Injury and Property Damage, the other coverages usually provided by a CGL policy are Personal Injury, Advertising Injury and Medical Payments. Bodily Injury and Property Damage coverages are the primary exposures related to construction.

Below is a list of CGL insurance requirements often included in construction contracts.

Minimum Limits

$1,000,000 each occurrence

$2,000,000 general aggregate *with dedicated limits per project*

$2,000,000 products-completed operations aggregate

Coverages

Products and completed operations coverage maintained for at least 2 years

Punitive damages coverage (where not prohibited by law)

Blanket contractual liability (included in 1986 ISO form)

Broad form property damage (included in 1986 ISO form)

Severabililty of Interest (included in 1986 ISO form)

[8] Moreover, in jurisdictions that prohibit indemnity for the sole negligence of the indemnitee, courts will enforce clauses that shift the risk of loss to an insurance carrier. *See, e.g.*, Certain Underwriters at Lloyds' London v. Oryx Energy Co., 142 F.3d 255 (5th Cir. 1998) (Texas Anti-Indemnity Act did not limit rights to insurance coverage even if indemnity provision was void under Act); *Anti-Indemnity Statutes Do Not Invalidate Agreements to Procure Liability Insurance Protecting the Promisee*, 14 Constr. Law Rptr. 9 (1993).

Underground explosion and collapse coverage (X,C,U) (included in 1993 ISO form)

Personal injury

Waiver of subrogation

Additional insured end

The primary CGL coverage issues that are of concern to the construction industry include the following:

- *Faulty Workmanship Exclusion*—Coverage usually only applies to *third party* property damage/bodily injury and not to property damage to the work or products of the insured. Carriers assume that their CGL coverage form protects against liability from fortuitous events only and argue that it is not intended to provide coverage for defective work, which is generally considered a "business risk" not covered by insurance.

- *Contractual Liability Coverage*—Contractual liability coverage applies when the contractor agrees to assume the negligence of another party for bodily injury or property damage to a third party. Several areas that are not covered include work within 50 feet of railroad track, warranties, assumed architects/engineers liability, liquidated damages, and breach of contract (failure to perform).

- *Professional Liability*—Most CGL insurers exclude coverage for Professional Liability (errors and omissions); however, it is important to note that contractors should not accept a policy containing ISO exclusion CG 22 43, which in addition to excluding coverage for professional design services, may unintentionally bar coverage for construction means and methods.[9] Two additional professional services exclusion endorsements (CG 22 79 and CG 22 80) have been developed to address this issue and provide broader coverage for design-build contractors.[10] Some CGL policies contain an exception to the "design flaw" exclusion for claims arising out of work performed by a subcontractor of the named insured. However, these policies are still subject to the work/products exclusions that usually will be invoked by the carrier to deny coverage for pre-completion losses.

- *Completed Operations Coverage*—The work/products (business risk) exclusions typically bar coverage for most property damage caused by construction accidents; however, the exclusion does not apply after turnover of the project to the owner. After completion, the products/completed operations coverage in many CGL

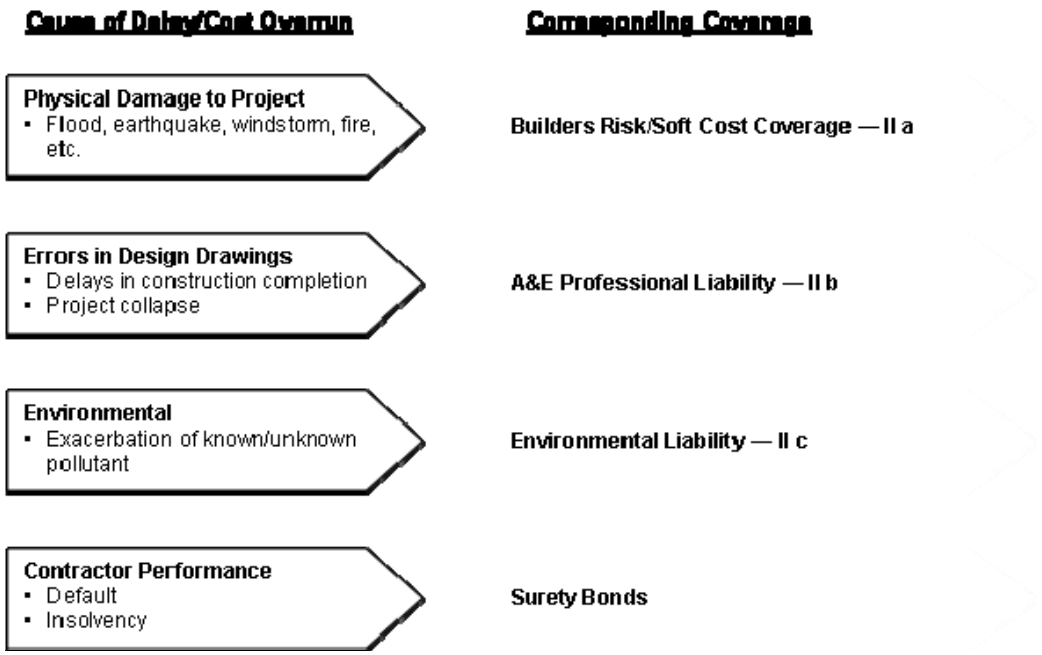
[9] *See, e.g.*, Harbor Ins. Co. v. Omni Constr., Inc., 912 F.2d 1520 (D.C. Cir. 1990) (sheeting and shoring activities by contractor constitute excluded professional design services).

[10] CG 22 79 limits the exclusion to services provided by the contractor acting in its capacity as a architect, engineer or surveyor. While construction management services might be covered, the exclusion will still bar coverage for a substantial portion of a design-build contractor's project. CG 22 80 broadens the scope of coverage by including an exception to the exclusion for design build contractors who actually perform construction workers on the project.

programs may protect against bodily injury or property damage arising out of the completed work. Coverage will exist as long as the construction contractor continues to renew its policy; however, unless a certificate or other evidence of ongoing, completed operations coverage is provided, problems will arise if the contractor does not renew or cancels the policy. While products/completed operations clauses may extend protections for post-completion losses, the best means of protecting against construction-related losses is by a comprehensive builders' risk program.

[2] Coverage for Other Construction-Related Risks

CGL coverage protects against claims of damage to third party property, but the "business risks" exclusions common in such policies restrict their scope and will be invoked to bar claims for damage to the project itself. As a result, the owner and contractor must consider alternative forms of project-specific and other types of coverage for such damage. The traditional insurance portfolio of property insurance coverages, combined with performance bonds, can shift approximately 70-80% of the risk of delay and cost overruns and other unforeseen losses to insurers:



[a] Project-Specific Builders' Risks

Most of the projects discussed in this chapter will need abroad builders' risk over risk of physical loss or damage to the project during construction. Coverage should be maintained on a project basis (covering all interested parties) to acquire the benefits (cost, claim coordination, and carrier management) of a single project placement.

To assure adequate risk protection, a project builders' risk program should be written on an "All Risks" basis and ideally should include transit, offsite storage, damages resulting from design errors, faulty workmanship and/or faulty materials,

expediting expenses, debris removal and maintenance coverage needs. All project parties should be involved in determining the breadth and application of the builders' risk coverage to be sure that deductibles are understood, and that the duration of such coverage is at least equal to or extends beyond the expected startup and testing period to final project completion.

Of course, project risks and obligations will extend beyond final completion and may either be specified by the warranty and risk assumption provisions of the construction contract or by applicable statutes of limitations and repose in the local jurisdiction. Usually, the parties assume that the owner's property insurance coverages and perhaps the contractors' CGL completed operations or professional liability coverages will assume responsibility for post-completion losses; however, consideration should be given to adding an appropriate "maintenance" cover to the project-specific builders' risk program. Such coverage, which may extend after completion for as long as the warranty period, should at least protect the contractor and its agents from claims arising out of post-completion warranty or maintenance work on the project. Indeed, some broad forms of maintenance provisions and endorsements may protect against post-completion damage caused by warranted construction flaws or project defects. This broad form of maintenance coverage should be considered as an additional means of protecting against project-related risks and avoiding controversy among the parties to the construction contract by shifting the risk of loss to insurance.

In most cases, the contractor should assume the risk of loss to the ongoing work and, therefore, should have full responsibility for placement of the builders' risk program, which would be part of the cost of the work specified in the contract. To adequately cover construction-related risks, the project risk management team must work very closely to develop a program with adequate limits, specified deductibles and appropriate coverage terms, to satisfy the needs of the various parties to the project.

[b] Professional Liability

In many cases, the financing of the Professional Liability Insurance ("PLI") is left to the individual design professionals or design-build contractor selected for the project. Risk of loss is allocated to these firms and insurance requirements are set forth within the contract documents. From a project owner's perspective, this may adequately protect the project. However, because many forms of builders' risk policies only cover construction-related accidents and contain specific exclusions for loss caused by faulty workmanship and design flaws, project-specific PLI placements represent an alternative that should be considered.

Project PLI coverage is considered most often when a project owner is concerned with the adequacy of the available limits from its architect/engineer and/or its E&C (Engineering & Construction) contractor. Project lenders also can drive this concern with their desire to have dedicated limits and coverage applicable to the project. In those cases, when a project's design is performed by firms that may not maintain adequate limits of coverage, it is very appropriate to specify increased limits in the existing policy

or to consider a project-specific placement. In certain cases, project financing can be assisted or improved by having PLI coverage as part of a fully integrated project risk management program.

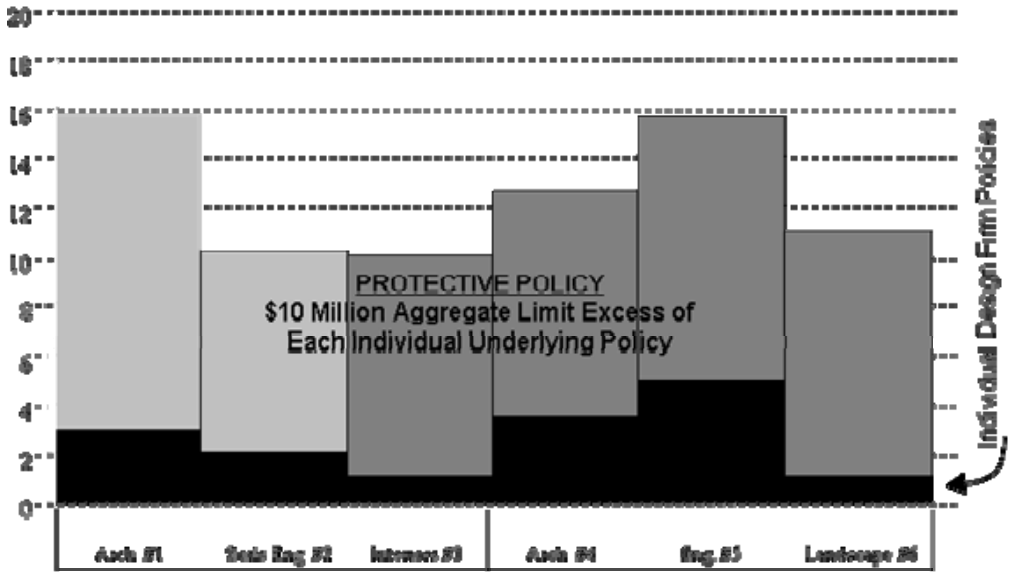
As with any project-specific insurance program, it is important to consider the cost of PLI coverage. Unlike primary casualty programs, savings are limited or may not exist at all in quoting a project-specific PLI program. As a general rule, engineers and contractors do not reduce their bid costs as a result of the cost of a project PLI placement; and means to provide increased limits within their existing insurance programs normally do not exist. Similarly, existing PLI programs usually are written on a "claims made" basis and probably have coverage periods (and amounts) that do not coincide with the duration or scope of the risk to the project posed by a faulty design: The ability to deliver specified limits covering *all* design professionals, to coordinate limits and structure coverage, and the wisdom of avoiding the erosion of limits and monitoring carrier financial strength are several reasons to consider project placements. Such considerations can become driving factors in project financing and satisfying the needs of lenders.

Because many, but not all, E&C contractors maintain separate PLI coverage ongoing normal operations, an expensive, project-specific PLI program, while beneficial to the overall risk management plan, may have only minimal value to a particular E&C contractor. However, the engineer and contractor assume the risk of liability for negligence in design for a finite period of time, usually specified by contract or by statute. The duration of this risk may overlap and exceed the duration of the claims-made coverage provided; and any optional "tail coverage" may not extend for the entire duration of statutory liability of the design professional. As a result, project-specific tail coverage may help to fill any coverage gap; but once such coverage has expired, any remaining risk falls back against the owner or against the engineer's or contractor's successor's PLI program, if any.

The adequacy of the coverage limits is always a discussion point when any form of project-specific insurance is placed. There is no perfect analysis that can lead to a 100% correct answer to the question of adequate limits for such coverage. Generally, however, the limit of coverage provided should be determined by the level of risk that is present. Typically, the limits of the property damage risk assumed in the builders' risk program are set at an amount equal to the contract cost or the completed value of the project. Too often, however, project PLI limits are inadequate for the amount of risk that may exist for property damage and personal injury liability based on design flaw claims. There probably is no rule of thumb that is commonly used in fixing the limits of PLI program; however, those limits should be at least as high and probably higher than the limits specified for a CGL program.

An alternative form of project PLI coverage is illustrated by the following diagram:

An Alternative: Protective Professional Insurance



This alternative, when chosen by an owner, allows individual engineers and architects to maintain their own PLI programs, provides that the design related risk can be allocated through traditional methods, and allows the owner to develop additional protection limits, when necessary. Assuming adequate limits can be obtained, cost may be less using this approach than that of a first-dollar, project-specific PLI program. Of course, as with any program involving multiple parties with separate policies issued by different carriers, claim coordination can become difficult and full rights of subrogation against the project's engineers and architects may be a likely condition of the umbrella policy.

This alternative has recently been utilized by contractors to provide assurance that they can satisfy the risk of loss caused by their design consultant's negligence, even if the consultant's own program fails to respond to a loss. This protection is available on a "protective" basis only or can be incorporated into the design/build contractor's own professional liability program.

[c] Environmental Liability

Sources and types of environmental exposures that the parties to a construction contract may encounter are numerous and complex. These risks are not necessarily restricted to projects involving the cleanup or remediation of hazardous waste (including asbestos abatement, superfund cleanup, and brownfields redevelopment). Many exposures arise from usual and common construction operations that may involve use of hazardous materials, contamination, or unexpected sure to pollutants found at the site.

Whether an owner has known or unknown environmental exposures, there four major areas of concern:

- *Soil* Exposures—construction waste and toxic waste, buried materials, spills;
- *Air Exposures—from* incineration, dust, metal recovery;
- *Surface Water Exposures—storm* water runoff;
- *Groundwater Contamination—from* boring and drilling

These exposures show up in several ways during a construction project:

- **Unknown Preexisting Contamination.** Contractors performing work may unknowingly spread or exacerbate a pollution condition. For example, a grading contractor may move contaminated soil and spread it throughout the project site.[11]
- **Known Contamination.** A Phase I site assessment may identify existing contamination (such as leakage, storage tanks, buried drums, or asbestos).
- **Construction Materials.** Materials used in construction contain a variety of toxic and hazardous chemicals—sealants, solvents, and paint are examples. A spill, inadequate disposal, or improper use of these materials will create environmental exposures.
- **Air Emissions.** Dust is a common problem at construction sites. Pollutants also are released into the air as a result of incineration or other gas-emitting machines or facilities. Heating, ventilation, and air conditioning (HVAC) systems can constitute another environmental hazard. Inadequate air circulation could cause mold and mildew growth in the system, creating an ailment known as sick building syndrome. Poor air quality could cause respiratory illness and result in personal injury as well as loss of use property claims.
- **Vandalism.** Given the high cost of hazardous waste disposal, it is not uncommon to find unidentified waste dumped on a construction site. Acts of vandalism also have damaged equipment, resulting in leaks of petroleum or solvents that can cause spills or sewer contamination.

Where an environmental hazard has been identified, a project environmental risk program should be developed to address the risks of all project participants. Coverage needs for both sudden and accidental and gradual pollution releases caused by construction activities can be incorporated into the same program. Adequate limits of coverage can be arranged; with markets providing excess capacity over primary programs. Specific environmental risk financing methods are more readily available today than ever before. Coverage is broader, cost is manageable and a variety of coverage alternatives are available. Once general project needs are identified, additional,

[11] Several courts have ruled that for purposes of CERCLA liability, a "'disposal' may occur when a party disperses contaminated soil during the course of grading and filling a construction site." Redwing Carriers v. Saraland Apts., 94 F.3d 1489, 1512 (11th Cir. 1996) (following Fifth and Circuit cases).

specific protection can be developed and placed for the benefit of all project participants, even after a specific environmental hazard requiring remediation is identified.

For instance, in the case of an environmental risk requiring specified remediation, risk financing can be expanded to incorporate coverage to guard against an unexpected increase in specified remediation costs. Such programs are written in consultation with risk managers and qualified environmental consultants. Capping the cost of remediation allows better control of the project budget by removing much of the uncertainty surrounding the cost estimate developed for bringing the property to the required level of remediation.

The owner usually retains the most significant long term risks of pollution exposures. While sudden and accidental pollution risk can be significant, loss caused by gradual pollution has proven to be the most catastrophic risk exposure. A project specific environmental coverage program also provides the owner of the property the ability to manage the long term nature of such risks. Through adequate program design, the owner gains control and full understanding of the potential cost of a claim that may not be brought until many years after the construction is completed.

It is also important to understand that, while there has been an increase in the number of carriers that offer pollution coverage, there still are a limited number of sources for such coverage. Carriers do not want to "stack" limits (expose themselves to the same risk through different insureds); therefore, they will introduce terms into policies that prevent such stacking from occurring. However, a project pollution program can be established for the benefit of all project participants that utilizes the maximum capacity in the market to lessen concerns over limits adequacy. Where it is important to have pollution coverage available for a number of project participants, a well coordinated environmental coverage program is the ideal solution. Develop such a program as a project team to assure that the interests of all parties are adequately addressed.

[D] Risk Management and Insurance Requirements

[1] Contractual Insurance Terms and Conditions

In drafting the insurance requirements of a construction contract, the owner, architect/engineer, and contractor must clearly understand project work scope and project risks, as well as the proper allocation of liability and property damage exposures and costs. Only then can insurance requirements be tailored to the project's particular needs.

The first consideration is how stringent the insurance requirements should be. If requirements are set too high, insurer objections, additional premiums, or unnecessary contract costs may result. Onerous requirements also may substantially increase the possibility that the other party will fail to meet them. If requirements are too lenient, loss exposures may not be covered adequately. Certainly, an owner who imposes stringent or overly rigorous requirements can expect to pay an additional contract fee (which may not be evident from the initial bid submitted) that is higher than a contractor's or architect's/engineer's standard markup for overhead and profit.

[2] Acceptability of Insurers

An insurance policy is only as good as an insurer's ability and willingness to pay claims. For this reason, the insurance provisions of the contract should include clauses reserving the right to:

- Reject coverage written by unacceptable insurers, or
- Impose eligibility criteria on insurers.

The first clause allows the owner or other parties of interest to investigate the insurer's financial condition in as much detail as necessary to confirm acceptability. Several independent rating agencies provide such information, as shown in the chart on the following page.

If the contract includes eligibility criteria, a typical clause might require the insurer to be licensed and admitted in the state and to have a Best's rating of A VII. The advantage is a relatively high comfort level that the carrier selected is financially sound—without having to do the research. The disadvantage is the impracticality of having an otherwise qualified architect/engineer or contractor change carriers within the time and expense limits established by a particular project.

Ratings on Insurers Financial Strength	
Source of Information	Publication
A.M. Best Company Ambest Road Oldwick MJ 08858-9988 (908) 439-2200	Best's Insurance Reports (domestic and international): *Best's Key Rating Guide* *Best's Review and BestWeek* *Best's Company Reports*
Standard & Poors Rating Services, a Division of McGraw-l-lill 25 Broadway New York NY 10004 (212) 208-8768	*Insurance Book* *insurer solvency Review* *Resource Reports* *Focus Magazine*
Moody's Investors Services 99 Church Street New York NY 10007 (212) 553-0300	*Financial Strength Ratings* *insurer in-Depth Analysis*

Stringent eligibility criteria also could disqualify many specialty underwriters from professional liability, pollution liability, and umbrella policies. Finally, requiring all underwriters to be admitted in a particular state may eliminate some excess and surplus lines carriers. These insurers are particularly competitive for large contractors and architects/engineers and offer the higher limits large projects need.

The best approach might be to set eligibility criteria and, to the extent an insurer fails to meet them, allow the interested party to accept or reject that carrier after considering all the pros and cons of the particular program being offered.

[3] Limits of Liability

[a] Factors in Settling Appropriate Limits of Liability

A starting point for deciding appropriate limits is to seek information from prospective contractors, architects/engineers, and other sources about the coverage limits typically maintained by firms of similar size and type. Some contractors, however, will be reluctant to reveal that information if they believe full disclosure of policy terms and limits invites larger claims. As noted above, adequate limits for project-specific builders' risk and related coverages can be measured by project cost and value. Limits for liability programs are less certain and usually are much lower.

Most major contractors and architects/engineers purchase at least $1 million of general and auto liability insurance. Higher limits are not unusual. On the other hand, subcontractors, specialty contractors, and small architects/engineers may carry only $500,000 to $1 million for general and auto liability. These lower limits may be acceptable to an owner if the project or services do not present unusual risks of loss in excess of the policy's specified limits. Contractors or construction managers entering into major constructional contracts or who perform services that present significant risks should be able to provide $10 million to $50 million in combined primary and excess limits; however, such policies often contain larger deductibles or self-insured retentions than policies with lower limits.

A typical approach is to define minimum acceptable levels of liability insurance, which can be altered project by project depending on:

- Construction cost;
- Project type and complexity;
- Size of contractor and architect/engineer;
- Types of services to be provided and related risks;
- Exposure to and magnitude of potential losses;
- Likelihood of third-party claims, such as losses caused by accidents in a commercial building in a major metropolitan area;
- Potential to cause significant service disruptions to utilities from the proximity to power, water, or industrial plants;
- Airport construction;
- Potential for catastrophic loss, for example, structure or tower crane collapse;

- Business interruption loss, such as profits lost because of office closure, plant shutdown, or delayed startup.

If the primary coverage (CGL, auto, and professional liability) limits are stated separately from umbrella or excess limits, the contract should include a clause allowing any combination of primary and excess limits that meets or exceeds the total required for primary plus umbrella or excess coverage. Similarly, required liability limits often specify a *minimum* insurance amount rather than an exact amount. Such a clause might read "with minimum limits of $3 million" rather than "with limits of $3 million." However, as discussed below, from the contractor's perspective, stating a minimum coverage amount could lead to the possibility that an insured claim may substantially exceed the minimum stated in the underlying contracts, and thereby erode coverage needed to satisfy other claims.

In addition to the foregoing, there are two other practical issues that should be considered in drafting contract language specifying policy limits, the applicable aggregate limits of the policy and policy deductibles and retentions.

[b] Aggregate Limits

Because an owner's liability protection decreases when the contractor's or architect's/engineer's general liability or professional liability aggregate applies to all jobs, it is important to determine whether the aggregate limits specified offer adequate coverage for a particular job site. Techniques to deal with this issue include:

- Ask contractors to provide the general aggregate on a per location or per project basis (the ISO has published a standard form of endorsement).

- Require the aggregate to be a multiple of the per occurrence or per claim limit, such as "$1 million per occurrence, $3 million in aggregate."

- Include contract provisions allowing the owner to require additional limits, or, if the original limit is exhausted, to reinstate it.

- Specify an owner's protective policy with separate limits.

- Increase required limits, for example from $1 million to $2 million for general liability.

Fortunately, the recent availability of high limits as well as high per location/per project aggregates makes this issue relatively easy to resolve. As market conditions worsen, however, coverage negotiation will become more difficult and prices will increase. In any event, owners and contractors should evaluate the impact of aggregates, consider alternatives, and build flexibility into contract requirements.

[c] Deductibles and Retentions

Contract insurance requirements should address the following issues regarding deductibles and retentions:

- Disclosure of whether the policies include a deductible or self-insured retention;
- Which party has responsibility for satisfying the deductible or retention;
- Whether to impose a maximum deductible or retention on a specific policy.

The importance of the first issue derives from the differences between deductibles and self-insured retentions. Although the terms often are used interchangeably, in the case of a deductible, the insurer pays the full amount of a judgment or settlement and then seeks reimbursement from the insured. Most (but not all) self-insured retentions require the insured to pay first and the insurer only pays the amount above the retention. Under either type of program, however, a carrier probably will be required to provide first dollar coverage in the event of the insolvency of the policyholder. Thus, insurance (like a surety bond) can provide needed financial assurance that a contractor will satisfy its indemnity obligations. Nevertheless, to assure availability of required limits, owners often require the contractor or architect/engineer to specify the amount of any deductible or self-insured retention in the particular coverage at issue. The owner can then determine whether the contractor should be allowed to obtain a policy with a lower deductible or to produce evidence of the contractor's financial ability to pay the specified deductible amount.

Added flexibility may be available because, for some policies, one party may be responsible for placing coverage, but another party pays the deductible. This situation comes up often in connection with builders' risk policies when the owner laces the policy, but requires the contractor to pay any deductible. It also on project-specific rages placed by owner, such as project professional liability. In that case, the owner secures a policy, but leaves to the architect/engineer the financial responsibility for the deductible and the incentive to avoid having to pay it.

The most workable approach may be to allow the purchaser of insurance to choose the deductible. This gives the purchaser flexibility to seek the most effective deductible and premium levels. Any party who deems the deductible too high or low can agree to buy down the deductible or be responsible for deductible payments above a specified amount. For example, an owner may purchase a builder's risk policy with a $100,000 deductible, but require the contractor to be responsible for only $25,000 of that amount.

[d] Surety Bonds

A construction surety bond is an agreement from a surety guaranteeing to the obligee (the owner) that a principal (the contractor) will complete the work or that the

surety will do so if the principal cannot. There are three types of construction surety bonds:

- *Bid Bond*—guarantees the bidder actually will enter the contract at the price bid and provide the required performance and payment bonds;

- *Performance Bond*—protects the owner from financial loss caused by failure of the contractor to complete the project or to build the project in accordance with contract terms and conditions - at the agreed price and schedule;

- *Payment Bond*—guarantees the contractor will pay all labor and material costs associated with the project.

The difference between bonds and insurance should be recognized. Insurers typically have a duty to indemnify and defend their insureds in cases involving fortuitous events, such as work-related accidents. In contrast, a surety bond pro-ides security for the contractor's obligation to perform and complete the project. As noted below, insurance does not usually cover performance related risks. Moreover, a surety indemnifies the obligee, but has no duty to defend the principal or the obligee. Also, an insured generally has no duty to repay the insurer, whereas the principal on a surety bond must reimburse the surety for any payments or performance undertaken on the principal's behalf. These differences become significant when an owner is anticipating how a surety will respond to a claim against the bond. Construction bonding is discussed in more detail in Chapter 30.

[4] Evidence of Insurance

All contracts should include a provision requiring evidence that insurance requirements have been met. Such a provision is important not only to verify the existence of insurance, but also to assure that liabilities assumed by the architect/engineer" or contractor under the hold harmless clause can be met. The type of evidence required may vary considerably from job to job:

- At the lowest end of the scale is a simple requirement that the other party provide a certificate of insurance (usually ACORD Form 25-S).

- The next level is a requirement for a certificate with specified attachments or endorsements.

- A higher level of security requires evidence of coverage on a special manuscript certificate form or a copy of an endorsement adding the project as a specific location and the project owner as an additional insured.

- The highest level requires a certified copy of the policy, complete with all specified amendments.

Proof of insurance should be confirmed as soon as possible, and before construction work begins. Insurance should be maintained throughout the course of the work and perhaps for a specific period after completion (tail and completed operations coverage, as mentioned above). Otherwise, establishing coverage for a construction-related loss may be extremely difficult.

[a] Modified ACORD Certificate

The most widely used form for certificates of insurance is ACORD Form 25-S (1/95). ACORD (Association for Cooperative Operations Research and Development), an entity which includes insurers, agents, and professional associations, produces a standard certificate and other insurance forms. Several aspects of the ACORD Form warrant discussion among the owner, insured, insurer, and issuing agent or broker:

- **Notice of Cancellation.** ACORD certificates specify the nature of the coverage, coverage amounts, the coverage period, and usually provide that coverage cannot be cancelled without advance notice to the certificate holder, usually the owner. A common problem is the conflict between a contract provision stating the certificate holder has a certain number of days notice before canceling the insured's policy, and the ACORD certificate, stating "the issuing company will endeavor to mail ___ days written notice ..., but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives." The ACORD provision is often modified by striking "endeavor to." Although the most common time of notice specified is 30 days, some insurers will agree to 60 or even 90.

- **Coverage Disclaimer.** The insurance specifications in a construction contract often detail specific coverages, amendments, or modifications, such as additional insured endorsements. If the owner wants to use the certificate to document coverage features of the contract specifications, the standard ACORD disclaimer may invalidate the parties' right to rely on coverage limitations or representations stated in the certificate. Like the notice of cancellation provision, the disclaimer can be revised to address this concern.

[b] Effect of ACORD Certificate

As a general proposition, an ACORD certificate is issued for informational purposes only and does not confer rights, as such, on the certificate holder. Most certificates contain the following language:

> "THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW."

Accordingly, any limitations regarding the scope of coverage provided by virtue of an "additional insured" provision in the construction contract must be stated by endorsement or in the body of the policy terms to be enforceable. For example, as discussed below,

when a contractor maintains a broad form of CGL coverage that contains a "blanket" provision allowing the contractor to name owners and other third parties as additional insureds, the contractor should be careful not to extend more coverage than is necessary to comply with the provisions of the construction contract. Thus, when a contract requires "at least" or "no less" than a specified amount of coverage, naming the additional insured up to the full policy limits could allow those limits to be exhausted entirely, thereby depriving the named insured or other parties of needed coverage for possibly significant monetary claims arising out of other projects or even other accidents on the same project.[12]

[E] Contractual Risk Allocation: The Additional Insured Clause

In negotiating a construction contract, it is common for an owner to be asked to be named as an "additional insured" with respect to certain liability coverages (including the Auto Liability, and most notably, the CGL and Umbrella/Excess Liability) required by the contract. In addition, the contract will invariably specify that the carrier must waive rights of subrogation against the additional insured. The carrier's claim for subrogation may be barred or limited as a matter of law,[13] but the standard construction contract requirement to be "named and waived" can be a trap that can lead to considerable controversy if the construction contract does not clearly specify the scope of coverage and responsibility for the deductible or self-insured amount of the policy.

The case of *CITGO Petroleum Corporation v. Yeargin, Inc.*[14] presents a classic example of a situation in which the parties did not clearly express their intent regarding coverage for construction-related accidents. In that case, the contractor had agreed to a limited form of indemnity clause that only protected the owner from claims arising out of the contractor's negligence and did not indemnify the owner for any portion of a loss attributable to its own negligence. The construction contract also required the contractor to "procure and maintain with reputable insurance companies, acceptable to CITGO [the owner], the insurance set forth below during the performance of this Contract .... Comprehensive General Liability Insurance covering all services to be performed hereunder, including coverages for liability assumed in this Contract ... [of] not less than [$1,000,000] per occurrence [naming] CITGO as an additional insured."[15] After paying approximately $7,000,000 to settle claims arising out of an explosion and fire during the course of the work, CITGO sued the contractor and its insurer, arguing that the contractor's CGL policy provided primary coverage for the first $5,000,000 of CITGO's loss.

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[12] As discussed more fully below, in *Citgo Petroleum Corp. v. Yeargin, Inc.*, 690 So. 2d 154 (La. App. 1997), the Louisiana courts rejected the argument of a contractor that the working of an ACORD certificate to the effect that the policy obtained only covered the additional insured "with respect to liability arising out of operations performed . . . . by the named insured" did not limit coverage for the "sole independent negligence" of the additional insured. *Id.* at 162-63.

[13] *See §* 4.03[D][2] *infra.*

[14] 690 So. 2d 154 (La. App. 1997).

[15] [15] *Id. at* 161-62.

The contractor, Project Construction Corporation ("PCC"), had complied with its insurance obligation in the construction by issuing an ACORD certificate naming CITGO as an additional insured and providing at least 30 days advance written notice of any material change or cancellation in the coverage. The underlying CGL policy allowed the named insured to "elect to designate [any party] as an insured on a certificate of insurance certifying coverage under this policy."[16] Given the breadth of this designation, the trial judge ruled as a matter of law that the applicable policy insured CITGO for its own negligence up to the full $5,000,000 policy limits. As explained by the Louisiana Court of Appeals, the trial judge concluded that "because PCC used clear language in the indemnity provision . . . . which obviously did not extend PCC's obligation to indemnify CITGO for the 'sole negligence of CITGO' and did not use as clear language in the insurance clause of the Contract . . . ., PCC knew that CITGO wanted to be covered for CITGO's own negligence."[17] The court rejected the proposition that restrictive wording in the separate ACORD certificate could limit the scope of the contractor's obligation and further concluded, by reference to the Louisiana law requiring the policy to be interpreted according to its own terms, that it could not consider any "extra-policy agreements between a policyholder and an additional insured which purport to extend, modify or limit coverage . . . ."[18] The court ruled that while the "policy gives PCC the discretion to name a third party as an additional insured under the terms and conditions of the policy, ... it does not give PCC the right to, by separate agreement with the third party, limit the terms and conditions of the coverage under the policy as they apply to the third party."[19] Accordingly, the court allowed CITGO to claim full coverage for its own negligence under the contractor's policy, subject only to the "other insurance" provisions of the policy and CITGO's own policies that also covered loss.[20]

[1] Overview of the Additional Insured Requirement

A provision requiring the contractor or architect/engineer to add the owner as an additional insured on a liability policy is a significant form of project risk transfer. Additional insured status can be a great advantage because, as ruled in *CITGO*, the additional insured gets most or all of the benefits of being an insured, including full coverage for the additional insured's own negligence, but without all of the obligations that may be imposed on a first-named insured. For example, the policy may specify that the "named insured" is responsible for any allocated loss adjustment expense up to the full amount of the deductible or retained amount. The additional insured is not normally responsible for payment of a self-insured retention; however, as noted above, the parties

[16] *Id. at* 162.
[17] *Id. at* 159.
[18] *Id. at* 163. *See also* note 12 and accompanying t
[19] *Id. at* 164.
[20] In a rather unusual, if not unprecedented decision, the court concluded that the "escape" other insurance clause in the contractor's policy would not be enforced *vis a vis CITGO* because the CITGO "primary" coverage contained an offsetting $3,000,000 deductible and hence was self-insured. However, the court enforced the escape clause with respect to CITGO's umbrella and excess coverages, requiring those policies to contribute their full limits to the loss before the remaining limits of the contractor's CGL policy could be reached. *Id. at* 166-171.

should consider including specific provisions allocating deductibles and retentions in negotiating the contract's risk transfer provisions.

Additional insured status offers the following:

- **Risk Transfer.** The status creates an independent, separate form of risk transfer. If the indemnification clause is unenforceable, or the indemnitor lacks the financial means to meet the duty to indemnify, the additional insured has another way of transferring the risk.

- **Additional Insurance.** This status means that the additional insured is entitled to coverage in addition to that provided by its own policies. However, as in *CITGO,* the coverage endorsement may specify that such coverage is provided on an excess and not primary basis. The parties should specify whether or not the additional insured coverage must be on a primary policy basis.

- **Duty to Defend.** Policies generally offer broad defense coverage. In contrast, indemnification agreements do not always require the indemnitor to provide a defense; some require reimbursement of the indemnitee only after conclusion of a lawsuit.

- **Broad Coverage.** The carrier's obligation to extend coverage can be broader than the contractor's indemnity and may not run afoul of the limitations stated in the anti-indemnity statutes. Moreover, broader personal injury and advertising injury protections may be provided for the additional insured.

- **Direct Cause of Action.** An additional insured has most of the rights of any insured under an insurance policy. The insurer must comply with applicable statutes when evaluating a claim from an additional insured. These statutes impose on the carrier a duty of good faith and a duty to investigate, and some include harsh penalties and punitive damages if the insurer fails to comply. Many contracting parties refuse valid tenders under indemnification clauses, knowing the indemnitee's only remedy is to seek damages for breach of the indemnity contract.

Additional insured status also can have drawbacks:

- **Other Insurance Disputes.** Because the additional insured usually will have coverage under separate policies, with various conflicting "other insurance" clauses, the additional insured's own insurer may resist providing primary coverage for the loss at the same time the other party's insurer is refusing coverage, claiming that the "additional insurance" should be excess only. The result is a dispute between insurers with the additional insured caught in the middle.[21]

[21] Disputes regarding interpretation of competing other insurance clauses should be adjusted among the carriers and should not delay payment of the claim. However, especially when the policy covering the "additional" insured contains an excess or "escape" other insurance clause, the contractor's carrier may

- **Loss of Defense Control.** The additional insured may have to rely on an unknown (or unfamiliar) insurer to assume defense of the claim.

- **Exhaustion of Limits. The 1986** ISO CGL policy form imposes policy aggregate limits. Therefore, every additional insured claim paid by the insurer depletes coverage available to the named insured.

- **Broad Coverage.** The same broad coverage that presents a potential benefit to the additional insured presents a potential disadvantage to the named insured, especially if numerous claims not originally anticipated arise and are paid by the policy and if the policy contains a large deductible or self-insured retention that is the responsibility of the named insured.

Major contractors can often extend additional insured status to a project owner without their carrier's specific approval if the CGL policy includes a blanket additional insured endorsement. Historically, carriers assumed that the additional insured status essentially paralleled the "insured contract" provisions of the standard CGL policy and only extended coverage for the vicarious responsibility of the additional insured for the contractor's negligent acts. In other words, the policy effectively insured the contractor's obligation to indemnify the owner for claims arising out of the contractor's fault, which is an obligation that can be implied at law or by statutes requiring contribution among joint tortfeasors. However, courts have almost uniformly rejected such a narrow limitation on the scope of the protections afforded to the additional insured.[22] As ruled in the *CITGO* case, limitations stated in an ACORD certificate and even in the underlying construction contract typically are not incorporated in the applicable policy, unless the policy contains specific language to that effect. A standard ISO endorsement, CG 20 33 07 98, contains the following language:

Section II—Who Is an Insured

> *[This policy] is amended to include as an insured any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract ... that such person or organization be added as an additional insured on your policy. Such person or organization is an additional insured only with respect to liability arising out of your ongoing operations performed by for that insured. A person's organization's status as an additional insured under this endorsement ends when your operations*

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refuse to pay, leading to protracted disputes over a variety of issues in the competing policies. *See* CITGO Petrol. Corp. v. Yeargin, Inc., 690 So. 2d 154 (La. App. 1997).

[22] Contrast Harbor Ins. Co. v. Lewis, 562 F. Supp. 800 (E.D. Pa. 1983) (finding additional insured endorsement ambiguous and construing endorsement as covering only vicarious liability based on restrictions in the endorsement) with Philadelphia Elec. Co. v. Nationwide Mut. Ins. Co., 721 F. Supp. 740 (E.D. Pa. 1989) (distinguishing the language interpreted in *Harbor* and finding all liability related to the insured's work covered under the additional insured endorsement).

While this endorsement specifies limits on the duration of the owner's status as an additional insured and requires a nexus with the contractor's work, it may not preclude a finding, as ruled in *CITGO***,** that the additional insured is protected for its own negligence, up to the maximum limits of the policy, which may exceed the limits of insurance specified in the construction contract. As a result, contractors who wish to avoid disputes regarding the scope of coverage available and who have policies containing a large deductible or retention, should consider adding the following language to the additional insured endorsement:

> *The amount of insurance is limited to that required by such written contract, but in no event will the limits of liability exceed those stated in the policy.*
>
> *The insurance applies only to liability arising out of negligent performance of operations, activities, or business conducted by or on behalf of the Named Insured.*[23]

Such language would be consistent with the contractor's goal to protect the owner from vicarious liability based on the contractor's fault, but may not be broad enough to satisfy the owner's goal to obtain the broadest possible insurance protection against construction-related claims, regardless of who is at fault. One solution to this potential impasse would be to obtain a fully integrated, project-specific program protecting *all* of the parties to the project from liability.[24]

Policies with blanket additional insured clauses often contain "excess" other insurance clauses. If so, and if the construction contract requires that the additional insured's coverage must be primary, the following or similar language should be added to the policy:

> *This insurance will apply as primary insurance as respects any person or organization for whom the Named Insured has agreed by written contract to provide insurance on an primary basis, and in such cases any other insurance available to such person or organization will be in excess and not contributory with insurance afforded by this policy.*

Alternatively, a contractor may use endorsement CG 20 10 (Form B) (Additional Insured-Owners, Lessees or Contractors-Scheduled Person or Organization). According to the ISO, this endorsement applies when contractual liability coverage is provided to the named insured by the same CGL insurer. Although coverage for liability assumed in indemnification provisions (contractual liability insurance) is separate and distinct from

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[23] This language should be contrasted with the bare bones, blanket additional insured language at issue in the *CITGO* case. *See* text accompanying note 15 *supra.* It should help to avoid disputes regarding the breadth of coverage otherwise afforded by the "arising out of language commonly used in the clause. *See, e.g.*, Mid-Continent Cas. Co. v. Chevron Pipe Line Co., 205 E3d 222 (5th Cir. 2000) ("arising out of language covers the sole negligence of owner causing injury to contractor's employee while on the premises).

[24] *See §* 4.02[F] *infra.*

coverage under additional insured status, this endorsement protects the additional insured if the indemnification provision is deemed unenforceable.

The duration of the additional insured coverage also is important. Current ISO additional insured endorsements extend the coverage only during the "ongoing operations" of the contractor. By limiting the endorsement in this manner, the owner may not have the desired completed operations coverage as an additional insured. To avoid this problem, contract insurance requirements should be specific, both as to the form of additional insured endorsement required and its duration. If completed operations coverage is required, the standard ISO form containing the "ongoing operations" limitation must be modified.

[2] Waiver of Subrogation

The principal of subrogation extends a legal right to an insurer, after paying a covered claim, to pursue another party wholly or partially responsible for the loss. By including a waiver of subrogation clause in a construction contract and obtaining the waiver from the insurer, parties can insulate themselves from subrogation claims, thereby eliminating future controversy and fully transferring the risk of construction-related loss to the specified insurance. However, because the waiver of subrogation can substantially affect the insurer's risk by cutting off potential rights to recoup paid losses, the insurer must be notified and consent to the waiver in advance to avoid jeopardizing coverage. Unfortunately, it often is impractical for an owner to be sure a contractor or architect/engineer obtained the consent of the carriers to waive subrogation. Owners usually must rely on the contractual representation that the waiver has or will be obtained, either for a particular project or on a blanket basis.

Waivers of subrogation rights often are contained in construction contracts for property damage losses covered by first-party coverage (covering the insured's *own* injury), such as that under builder's risk policies (AIA Document A201 (1987), ¶ 11.3.7). Since these coverages are primarily triggered by covered occurrences without reference to negligence or fault, an owner and a contractor may agree contractually to allocate them to a single insurance source and waive claims and rights of subrogation for negligence or fault between them. However, builders' risk insurers are reluctant to allow waivers of subrogation against architects/engineers because design errors are sometimes the cause of significant covered losses.

Waivers of subrogation in connection with liability coverage for the insured's legal liability to a third party, which is triggered by the insured's negligence or fault, are not as common. For example, an employee of a contracting party could have caused the claim through active and predominant, but not exclusive, negligence on the job. Nevertheless, the employer, whether the contractor or owner, would still be entitled to indemnification from the CGL insurance carrier if named as an additional insured under the policy terms. If a waiver were in place, the contractor's carrier would not have any further recourse against the active and predominantly negligent party.

Similarly, some liability insurers may be reluctant to issue blanket or even project-specific waivers of subrogation. Most professional liability carriers may refuse to waive subrogation rights, even though they rarely exercise those rights. However, larger architects, engineers, and contractors usually can obtain waivers of subrogation from their liability carriers for little, if any, additional cost. As a result, the parties to large projects seeking true risk transfer should request waivers of subrogation, not only for property damage losses, but also for general and professional liability claims.

[3] Other Benefits of Multi-Party Coverage: The Anti-Subrogation Rule

Waivers of subrogation are an important risk allocation tool. However, even when the contractor or other party required to obtain insurance fails to obtain an express waiver of subrogation, the parties who are named as insureds may still avoid controversy, because many jurisdictions bar an insurance carrier from pursuing a subrogation claim against its own insured or an additional insured. This anti-subrogation concept is applied to avoid disputes between an insurer and the parties insured under the same policy, but it also may be extended to bar claims between the insured parties arising out of the subject matter of the underlying contract. Thus, in some jurisdictions, formal waivers of subrogation merely confirm the general, common law rule that co-insureds may not sue each other (and insurers may not seek subrogation against their own insureds) for damages covered by the insurance policy.

Several courts have ruled that when parties to a construction contract mutually agree that insurance will be obtained as part of the bargain, the contract in effect provides "mutual exculpation" for any covered loss. In other words, absent specific contract language to the contrary, the parties may be deemed to have allocated all risks of loss to the required insurance, thereby avoiding costly and time-consuming disputes regarding allocation of responsibility for construction-related losses. For example, in *Norfolk Shipbuilding & Dry Dock Corp. v. Seabulk Transmarine Partnership, Ltd.*,[25] the owner of a seagoing vessel entered into an agreement with Norfolk Shipbuilding, as contractor, to construct a tank vessel by joining an oil tanker with a barge. The contract required Norfolk Shipbuilding to obtain and pay the premium for builder's risk insurance, with Seabulk (as owner) named as the insured. The contract provided:

> Contractor [Norfolk Shipbuilding] shall provide insurance . . . . With respect to such insurance, Owner [Seabulk] shall be named as "Principal Assured" and such insurance shall name Contractor ... as "Additional Named Assured" where indicated therein .... Any default or refusal of underwriters to act or accept responsibility for any occurrence or claim shall not be deemed a default by Contractor, save and except if due to nonpayment of premium, or material misrepresentation of Contractor, or

[25] Nos. 93-2610; 93-1312, 1993 U.S. Dist LEXIS 14850, 1993 WL 432335 (E.D. La. Oct. 13, 1993).

> breach of any warranty as between Contractor and the insurance company voiding its coverage.[26]

After completion, Seabulk discovered that various defects in the ship's construction had caused a reduction in the speed of the vessel. Seabulk sued the builder for breach of contract, alleging damages for faulty design, construction, and workmanship (covered by the insurance), and claims for incomplete work and delay (uninsured claims) In defense, Norfolk Shipbuilding argued that the builders' risk insurance it had been required to procure was the sole basis upon which Seabulk could make claims.

The Louisiana district court agreed, finding that the language of the contract clearly and unambiguously established that the parties intended to shift the risk of loss for construction-related claims to the builders' risk coverage:

> The parties negotiated and agreed that [Norfolk Shipbuilding] (the contractor) would pay to insure Seabulk (the owner) against the possibility of [Norfolk Shipbuilding's] covered negligence .... [I]n approving the insurance as providing for all risk due to [Norfolk Shipbuilding's] covered negligence, Seabulk must be seen to have agreed that its relief under the policy was its exclusive remedy for covered damages.[27]

Because the district court ruled that the claims for faulty design, construction, and workmanship were covered by the builders' risk policy, the court dismissed these covered claims from the lawsuit.

Several other courts have ruled that the required insurance policy provides the exclusive remedy for construction-related claims, holding that one insured cannot sue another party who also is an insured under the same policy.[28] For instance, in *South Tippecanoe School Building Corporation v. Shambaugh & Son, Inc.*[29] the court noted:

> [I]t appears to us that where neither party has a legal duty to insure but each foresees the potential of a loss occurring by negligence or accident, the reasonable expectation of both in expressly imposing the duty to insure against the loss upon one of them is that the other will be protected as fully as if he had assumed the duty himself .... With agreements to insure, the risk of loss is not intended to be shifted to one of the parties; it is intended to be shifted to an insurance company in return for a premium payment ....[30]

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[26] 1993 WL 432335, at *2.

[27] *Id.*

[28] *See* Steamboat Dev. Corp. v. Bacjac Indus., Inc., 701 P.2d 127 (Colo. Ct. App. 1985); Dyson & Co. v. Flood Engineers, Architects, Planners, Inc., 523 So. 2d 756 (Fla. Dist. Ct. App. 1988).

[29] 182 Ind. App. 350, 395 N.E.2d 320 (1979).

[30] 395 N.E.2d 320, 327 (quoting Morsches Lumber v. Probst, 180 Ind. App. 202, 388 N.E.2d 284 (1979)).

As a prerequisite to success on this "insured versus insured" defense, a contractor or architect/engineer must show that the required insurance covers the claimed loss.[31] The defendant also must show that the parties intended it to benefit from the required insurance, either because it was named as a co-insured or additional insured on the policy or through other contract language.[32]

The anti-subrogation concept and the insured vs. insured defense provide additional reasons to include a carefully crafted risk allocation clause in a construction contract. To the extent the risk is shifted to an insurance policy that names multiple parties as insureds, the policy may be deemed the exclusive source of recovery for the financial loss caused by any party covered by the policy, thereby eliminating the often significant expense and disruption caused by protracted litigation or arbitration regarding the cause of the loss. However, an insurance clause also may have unintended, adverse consequences if the party responsible fails to obtain the contractually required insurance. In such instances, the defaulting party cannot invoke the "insured vs. insured" concept in defense of the claim, and it also may not be able to invoke the anti-indemnity statutes or the restrictive wording of an indemnity clause in defense to a claim based on breach of the contractual obligation to obtain (or maintain) the required coverage. In such a case, the defaulting party, by its breach, may be deemed to have effectively "self-insured" the other party for any losses that would have been covered by the missing insurance. Because losses caused by the sole negligence of the additional insured may have been covered by the policy, the party who failed to obtain required coverage may also be responsible for such losses and hence face expanded liability far beyond that contemplated in the contractual indemnity provisions.[33] Only by clearly delineating and following up on responsibility for obtaining necessary insurance can a contractor or architect/engineer rely on the reallocation of risks provided by contractual insurance, waiver of subrogation, and indemnity clauses.

[F] Subcontractor Insurance Requirements

A question that often arises when drafting insurance requirements for construction contracts is whether or not the general contractor should require all subcontractors to maintain certain types and levels of insurance coverage. The following sample provision is typical:

> *Subcontractors' Insurance: The contractor will cause each subcontractor employed by contractor to purchase and maintain insurance of the types specified below. When required by the owner; the contractor will furnish timely copies of certificates of insurance evidencing coverage for each subcontractor.*

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[31] Midwestern Indem. Co. v. Leffler Constr. Co., 463 N.E.2d 1130 (Ind. Ct. App. 1984).

[32] *South Tippecanoe*, 395 N.E.2d 320, 327.

[33] See, e.g., Lopez v. Hartford Accident & Indem. Co., 495 So. 2d 375 (La. App. 1986) (owner may recover damages from contractor equal to the amount of insurance the contractor neglected to obtain).

Often, however, the negatives of specifying the amounts and scope of subcontractor insurance outweigh the positives:

- An owner deciding to impose these requirements runs the risk of excluding otherwise qualified subcontractors who may not have or cannot obtain the specified types and limits of insurance.

- The owner attempting to differentiate between the insurance types and limits required relieves or hinders the contractor from deciding on risk allocation—the type of service for which the owner is paying the contractor a fee.

- Imposing subcontractor insurance requirements can create legal arguments against the owner. For example, a contractor may argue the owner has waived that requirement if the owner fails to review insurance certificates annually. The contractor could also argue the specified limits constitute a limitation of liability if the subcontractor's limits are less than the contractor's.

The better approach, therefore, is to require the contractor or architect/ engineer to provide insurance to cover their responsibilities and those of any and all subcontractors. However, as noted above, to obtain the benefits of immunity from suit under the "statutory employer" concept, the owner or contractor must require every subcontractor to maintain workers' compensation coverage.[34] One means of obtaining such "global" coverage is through an owner or contractor sponsored program, discussed below.

[G] Owner Controlled and Other "Wrap Up" Insurance Programs

[1] Owner Controlled Insurance Defined

An OCIP ("Owner Controlled Insurance Program"), also known as a wrap-up, is the placement of a single, project-driven insurance program covering all job-site risks of the project owner, the general contractor or construction manager, and all contractors and subcontractors. Under such plans the sponsor procures workers' compensation, commercial liability, excess liability and builders' risk coverages for contractors and subcontractors performing job-site operations. Although an OCIP consolidates all the insurance programs for the construction project, the legal relationships between the parties to the construction remain unchanged. An OCIP does not shift the chain of liability, and the negligent party is still responsible for his or her own actions.

Control of the site and coordination of a single safety program is a major objective of such programs. Safety is the most important aspect of any job site insurance program. Centralizing the multitude of independent safety programs of contractors and subcontractors involved in the construction into a single system with central accountability can dramatically reduce both the potential for injury and the overall program cost. On the other hand, contractors with sophisticated risk management and

[34] *See* note 2 *supra.*

safety programs may be reluctant to cede responsibility for management of job site safety to the owner or other third party.

[2] Contractor Controlled Insurance Plans

One notable development over the past few years has been an increase in the number of contractor-sponsored wrap-up programs, typically referred to as CCIPs ("Contractor Controlled Insurance Programs"). Contractors are sponsoring nearly twice as many programs as they were just a few years ago. In addition, a number of large contractors are, for the first time, evaluating the use of wrap-ups for their large construction projects.

Historically, contractors have not sponsored wrap-ups because the downside financial risk resulting from poor loss experience, when coupled with the myriad of business risk inherent in a single competitive bid, outweighed the financial gains resulting from favorable loss experience. In short, the risk did not justify the reward. With most wrap-up financial risk removed (due to a "stop-loss aggregate" or the amount of deductible losses being capped), contractors are increasingly turning to CCIP as a risk financing technique to either improve profitability or increase their competitive posture.

[3] Flexibility in Risk Financing

Sponsors of wrap-up programs can now choose from an expanded menu of funding options, combined deductibles, collateral alternatives, and loss-communication provisions.

Traditionally, wrap-up programs, like many construction related workers' compensation programs, have been written using either an incurred-loss or paid-loss, retrospectively rated plan (loss sensitive), with a sponsor effectively paying only its own losses to minimize its allocable share of the insurance program cost. Complementing traditional "retro" plans are two wrap-up funding options: large deductible plans and self-insured programs that incorporate excess workers' compensation coverage. These rating plans, used by owners and contractors, are the most popular funding options today. The self-insured option (sometimes "fronted" by an admitted insurer to satisfy state law insurance requirements) is particularly popular with sponsors who already use a captive insurer to underwrite their corporate risk.

When wrap-ups are written on a paid-loss retro or large-deductible program, insurers have long required irrevocable letters of credit to collateralize losses and satisfy statutory accounting requirements. These financial instruments have presented insureds with significant financial and administrative obstacles, not the least of which has been the prolonged period (as much as 5 years) for which insurers require collateral, usually in the form of an irrevocable, renewable or "evergreen" letter of credit ("LOC"). Several wrap-up insurers are now offering or accepting LOC alternatives. The two most widely used alternatives are financial surety bonds and premium financing (the premium financed is the program basic premium plus the insurer's actuarial loss estimate). These collateral alternatives are competitively priced when compared with traditional LOCs and often

have more stringent triggers before they can be called. To ease the timing and financial uncertainty associated with loss-sensitive wrap-ups, some insurers are now willing to incorporate pre-agreed loss communication provisions (loss-development factors and rates) into their wrap-up proposals. This option is particularly appealing to single-project wrap-up sponsors who heretofore had to keep their books open on projects long after construction was completed.

[4] Integrated Project Insurance

With the complex risk management challenges and high risk transfer costs facing owners, designers, construction managers, and contractors today, some owners are turning to a new breed of wrap-up program: Integrated Project Insurance ("IPI"). IPI is a wrap-up that extends beyond traditional workers' compensation and general liability risks to include:

- Professional Liability
- Contractor's Pollution Liability
- Builders' Risk, including consequential loss

Other business risks inherent in today's more sophisticated projects also can be incorporated into an IPI program. These include delay-of-completion, force majeure, debt service guarantee, systems performance, political risk, and contingent business interruption arising from design error.

Using a single insurer to provide all project coverages, an IPI program is a insurance seamless insurance placement providing broader coverage, significant limits, and a single retention for all coverage lines on both a per-occurrence and project-aggregate basis. IPI programs also afford a project owner the ability to:

- Better satisfy stringent lender insurance requirements for nonrecourse debt-financed projects.
- Reduce risk management contingencies (because a project sponsor is better able to predict the project's total cost of risk). The likelihood of an uninsured loss is reduced through broader coverage provided by a single insurer; the likelihood of an underinsured loss is reduced by purchasing higher policy limits; and, the cost of retained losses is more predictable since an owner pays only one deductible per loss, regardless of the number of coverages involved in the claim.
- Mitigate risks that arise out of integrated contracting methods like design-build and design-build-own-operate ("DBOO").

Considering the variety of placements available today, every risk management team should at least consider the possibility of employing an OCIP, CCIP or IPI program to provide coverage for identified project risks. While such programs are not appropriate

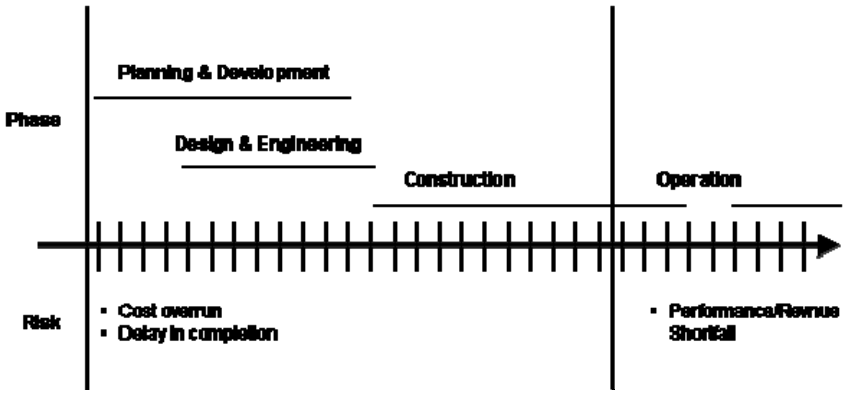
for all projects or all project participants, especially those who place a high value on their ability to control their own insurance risks, in certain contexts, and as an alternative to requiring a variety of specialty programs to be written on a project-specific or excess limits basis, a global form of wrap-up program can be a viable, cost effective means of financing project risks.

§ 4.03 INSURANCE COVERAGE FOR ECONOMIC LOSS

[A] Delay Risk

Risks associated with completing the project can represent some significant exposures. Aside from any liquidated damages for delays that are specified in the contract, economic losses caused by delayed startup of a new plant or delayed occupancy of a large commercial building can be substantial. The policies discussed in Section 4.02 typically cover losses caused by physical loss or damage to the work during construction; but gaps in coverage for other, economic risks, some within and others outside of the control of the project participants, can be a significant risk exposure to a project. Throughout the process of financing project risk, the full extent of the project's delay exposures must be clearly understood. Most often, the risk of delay is viewed only from the owner's perspective, but the contractor also will have costs *(i.e.,* extra expense to complete the project) associated with significant project delay.

The risk of economic loss by delay may require insurance coverages that go well beyond traditional insurance placements for casualty losses. A fully integrated program should respond to financial risk (cost overrun, delay, and revenue shortfall) during all phases of the project including: planning and development, design and engineering, construction and operations.



A well-designed program will have a significant impact on the project financing by providing a single source to look towards in the event of the project's inability to meet expectations or initial parameters resulting from:

- **cost**—project budget exceeded due to cost overruns;

- **schedule**—delay in project completion;

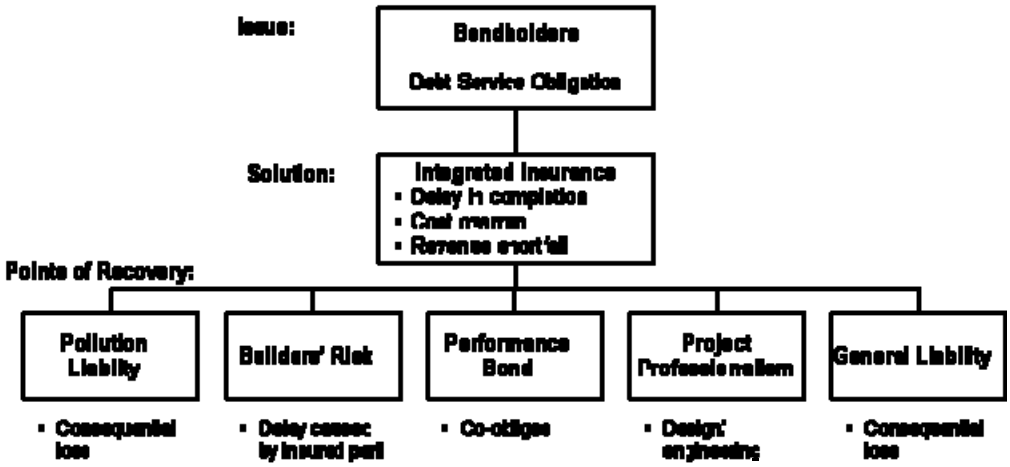
- **performance**—project not meeting projected output and revenue goals.

Many of these risks are well within the contractor's responsibility with defined penalties for late completion and/or inadequate performance—liquidated damages. However, the contractor is not typically held responsible for "unforeseen event risk" or force majeure risk that causes unexpected delays.

Ultimately, all these risks must be identified and a source of funds located to offset these potential exposures. This source can take the form of liquidated damages plus an irrevocable letter of credit from the contractor, traditional insurance, funded reserves, contingent equity, *etc.* Unfortunately, almost all forms of builders' risk policies and other traditional property damage coverages do not cover economic loss caused by delay and business interruption. Similarly, business risks exclusions and other policy limitations may bar claims for warranted faulty workmanship or design flaws that cause economic loss by reason of diminished output. Accordingly, alternative forms of insurance may be needed to address these types of economic loss.

[B] Enhanced Coverages

A recommended approach would be to incorporate additional dimensions of delay/performance coverages that respond instantaneously to debt service requirements and that allow recovery from other applicable policies that may be triggered after completion of the project.

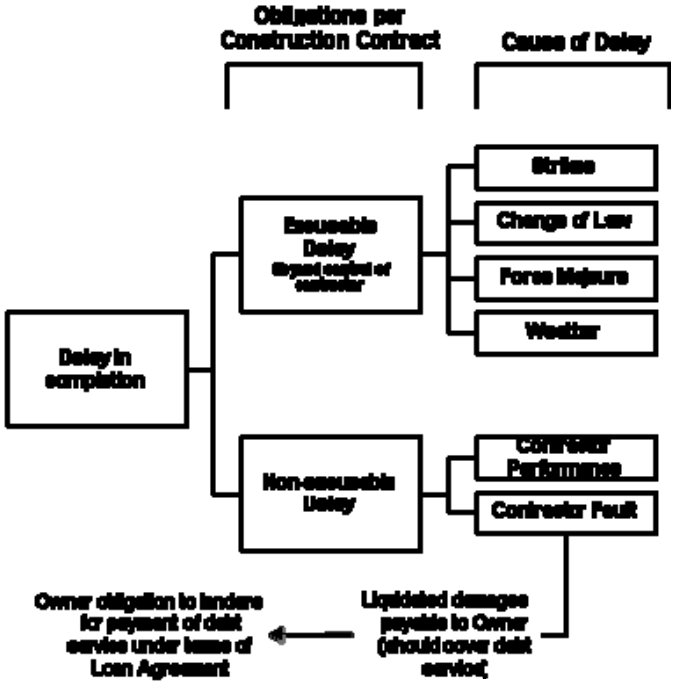


[1] Delay in Completion Coverage

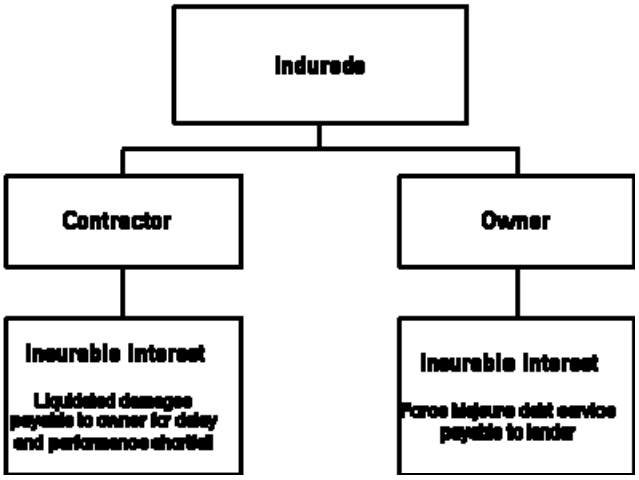
Conventional insurance will cover some consequential economic losses resulting from traditional perils (fire, windstorm, construction accidents, *etc.),* but there are other risks that can cause significant loss that are not typically insured by builders risk and similar programs:

- Sequencing of subcontractors;
- Labor problems, including strikes;
- Permit problems;
- Repair of faulty workmanship and defects;
- Late delivery or unavailability of building material.

For most projects, these risks must be assumed by some combination of the owner, lenders and principal contractor. However, force majeure and liquidated damages coverages can be obtained to insure against most of the delay exposure that either is outside a contractor's control or that is passed to the contractor in the form of contractual penalties. The amount of coverage limits is typically linked directly to the payment of debt service under the terms of the loan agreement. This will give assurance that if the project is delayed, debt service will continue uninterrupted.



The final program design can assume one of several different forms, depending on the coverages purchased (force majeure, liquidated damages) and which parties are to be named as an insured on the policy (owner, contractor/architect). The broadest option would be to cover the interest of both the owner and contractor:



Another option for an owner concerned about consequential damages caused by delayed startup or occupancy would be to insure itself against all delay damages, while preserving the carrier's rights to seek full subrogation against the contractor.

[a] Liquidated Damages

Traditionally, the contractor has retained the risk of paying liquidated damages for delay as a contingent cost of its proposal. Seldom has a risk financing mechanism been employed to cover liquidated damages specified by contract, unless the risk of these damages is considered to be substantial when compared to the total risk and profit level of a particular project and the cost of available insurance. Unfortunately, the cost of financing this risk through insurance usually is significant (3% to 7% of the policy limit).

Nevertheless, exposure to reasonable liquidated damages should be considered as part of the construction risk financing plan, together with other delay-related protections available to the project. For example, when delay protection can be obtained for any cost associated with project delay as long as such cost arises outside of the control of the owner, the owner may not need to insist upon significant liquidated damages from the contractor. A reduction in the required liquidated damages also should reduce the cost of risk to the contractor, thereby possibly making funds available to obtain increased insurance coverage for unforeseen project delay, such a delay caused by force majeure. Reduction in risk of liquidated damages should reduce contractor cost, thereby lowering the overall project's cost of risk.

While the anti-subrogation and waiver of subrogation concepts discussed above will not apply to a delay damages policy procured solely by the owner, the carrier issuing such a policy cannot or should not have unlimited subrogation rights against the contractor for excessive liquidated damages. Otherwise, from the contractor's perspective, risk is not changed and the contractor's costs will remain the same. Such a duplication of risk coverage will increase the project's risk financing cost, thereby defeating the essential purpose of a planned risk management strategy. Contractual language should be developed that carefully coordinates risk financing positions with

contractual liquidated damages provisions, thereby controlling potential unanticipated costs.

A conflict also arises involving liquidated damages and the usage of advanced loss of profits ("ALOP") or delay in start-up ("DSU") coverage as part of a builders' risk program. The builders' risk carrier will expect the liquidated damages in the contract to be primary for losses arising out of contractor delays. When this is done, the cost to the project can be increased as a result of having the cost of the ALOP or DSU coverage added to the contractor's contingency cost for liquidated damages. It would seem appropriate, and in the best interest of the project's total cost of risk, to transfer the entire cost of this risk to a sole source of reimbursement for the potential loss, i.e., the insurance carrier. Unfortunately, however, many carriers will not relinquish the right to claim their share of liquidated damages, or to seek subrogation from the party at fault. Nevertheless, it is important to recognize this potential cost conflict and to make it part of the overall project risk analysis.

[b] Force Majeure

For the purposes of this chapter, cost of delay associated with force majeure events are those costs that arise from events caused by external forces that are beyond the reasonable control of the party suffering the loss. Most construction contract wording will allow for time extensions associated with force majeure events, thereby removing the risk of liquidated damages or other penalty damages from the contractor. However, force majeure wording very seldom provides any remedy for the potentially catastrophic costs to an owner associated with the delays caused by these unforeseen events.

Certain risk arising from "acts of God" can be managed as part of the coverage provided by the project builders' risk program. However, for coverage to apply under the builders' risk program, there must be some physical loss or damage to the work. Other events that might qualify as force majeure under the contract, but that do not cause actual physical loss or damage to the project, can lead to a substantial delay in completion. Such risks (i.e., change in law, unknown environmental or archeological discoveries, labor disturbances, etc.) can have a significant impact on the project schedule and cost.

Deciding whether or not to insure against such risk depends to a large degree on the estimated impact of a force majeure event. Consider the following:

> On a toll highway construction project that is 50% complete, the contractor discovers an unknown archeological site that requires the project to stop for a significant period of time while the site is excavated, cataloged and studied. The project is delayed for 90 days causing delay in completion, increased construction costs due to the need to maintain certain ongoing costs (labor, equipment), delayed revenue generation and delayed debt service payments.
>
> A project risk management team cannot foresee this possibility, but it can transfer the risk of any catastrophic exposure that such may cause. Large

deductibles can be maintained at the project level to lessen the cost of such coverage, while keeping lenders satisfied that debt service will be maintained despite the resulting schedule delay. Cost of debt is lessened due to the lender assurance of continued debt service.

Force majeure risk unrelated to physical damage to the work traditionally has not been financed by insurance, but has been an assumed risk by each party who faces the exposure. While other mechanisms have been available to finance this risk, they are expensive and have not necessarily delivered the capacity to protect against significant economic loss from force majeure events. However, with the increased usage of non-recourse financing in many projects today, lenders are showing an increased awareness of the need for this type of risk financing. Available insurance capacity ($50 to $100 million) has increased in several markets to allow for significant risk transfer to take place.

In some instances, a project owner may implement a risk financing plan for force majeure events, while at the same time attempting to transfer significant portions of the risk to its contractor via contractual terms. Many, if not all, contractors will strongly object to assuming the financial risk of any force majeure event. If a particular project ends up with an overlap of risk financing and contractual allocation, it is very likely that the project's total cost of risk will increase significantly. If a project bears the cost of both the risk financing and the contingencies associated with force majeure events, the project's total cost will undoubtedly increase.

Fortunately, insurance coverage can be arranged to be triggered whenever the risk is outside of the reasonable control of the owner, in most cases the party that has the least control over the ongoing project. While this approach maximizes the coverage potential, it may indirectly re-allocate the risk back to the contractor via subrogation terms contained within the owner's policies that the insurer may refuse to waive or limit Coverage for economic loss caused by force majeure events should be structured to avoid allowing the carrier to subrogate against the contractor, except in very rare instances (i.e., gross or willful negligence). The carrier should not have greater rights than are specified in the contract between the owner and contractor; however, the carrier may still retain its subrogation rights to pursue claims against any other third party who caused or contributed to the loss.

[2] Efficacy/Performance Risk

Historically, financing performance-related risks has not been done except in those rare instances when the risk of loss is substantial. As a result, cost of the transfer of such risk has been significant, as the concept of adverse selection seems to be the "rule of the day." Lenders have played a significant role in performance-related risk management. They have acted somewhat as the underwriting authority, assuming the risk of project failure caused by non-performance or inadequate performance of the work. When such risks are deemed to be excessive, lenders simply refuse to provide the required capital, thereby eliminating the need for risk financing by eliminating the funding for the project.

The insurance market has begun to allow for a broader, risk financing perspective regarding project performance. Experienced project teams (proven design professionals, construction teams and operators) can have a significant impact on the ability to reasonably finance a part of this otherwise fully "contingent" lenders' risk. The ability to provide a project owner and its lenders with debt service protection as part of a comprehensive risk management plan has also changed the way that otherwise conservative parties are willing to evaluate and manage construction risks. A combination of risk retention and risk financing can be arranged to provide significant monetary risk transfer advantages to a project.

In sum, to successfully evaluate and/or develop a risk-financing plan for a construction project, as with many components of the project overall management plan, a full team effort is required. The owner's expectations regarding performance have to be realistic, the design team must understand the process and be able to deliver proven technology, and the construction team must have proven experience to complete the job according to the design specifications and project requirements. While this sounds like very basic construction theory, the relationship between the parties and their insurance carriers is critical to developing a cost-efficient risk management plan. Each party to a construction contract bears significant financial risk during each step of the process of designing and building the project. Fortunately, a significant portion of this risk can be insured by the various types of policies discussed above. The process of allocating and paying for this risk assumption is not simple, and requires careful consideration, cooperation and coordination between all the parties involved.