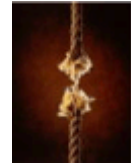


Construction Risk

Risks & Exposures



There are very few industries that have the risks and exposures of the construction industry. The ability for construction firms to effectively identify, quantify and control their risks and exposures is a formidable task on a daily basis. Particularly, with the increasing growth of design-build as a project delivery method, and participating in the administration of wrap-up insurance programs. Having a capable risk management consultant as a member of the project team to provide sound advice on how to analyze, mitigate and manage these risks and exposures has become a necessity for most construction industry clients.

C-Risk provides holistic risk management solutions that are based on a systematic methodology of identifying and analyzing all of a client's risks and exposures. The ultimate benefit of risk analysis is to plan for and mitigate risk, but before a risk can be mitigated, it must be identified, understood, and quantified. This is by far the most important step of the risk management process.

As part of the C-Risk holistic risk management method, we work with the client to develop a framework that is within the client's specific project and/or contract constraints, breaking down all risks and exposures into addressable and manageable components. Using this approach, C-Risk can provide the client with the assurance of a complete risk management assessment. To assist you with your initial risk management planning process, the following is a listing of many construction industry risks and exposures, delineated into the categories of: Financial, Contractual, Operational, Organizational and Insurable Risks.

● **Financial Risks & Exposures**

- ⊕ Project Financing (Debt, Equity)
- ⊕ Labor and Material Costs (FTE's, Contract, Outsourced)
- ⊕ Earnings Volatility (Revenue Recognition, EPS Growth)
- ⊕ Currency Fluctuation (Foreign Exchange, Arbitrage)
- ⊕ Interest Rate Changes (Credit Risks, Bonding)
- ⊕ Commodity Price Fluctuations (Options, Derivatives)
- ⊕ Regulatory Exposures (IRS, FASB)
- ⊕ Funding Risks (Government Contract Funding, Allocations)
- ⊕ Employee Stock Options (Pension Funds, Dividends)

[TOP](#)

● **Contractual Risks & Exposures**

- ⊕ Contractual Liability (Breach, Third-Party Actions)
- ⊕ Indemnification (Hold Harmless Clauses)

- ⊕ Indemnification Forms (Limited, Intermediate and Broad)
- ⊕ Design Responsibility (Design Delegation, Assumption of Risk)
- ⊕ Warranties (Express, Implied)
- ⊕ Waivers of Subrogation
- ⊕ Liquidated, Consequential and Punitive Damages Clauses
- ⊕ Force Majeure Clauses (Schedule Delay)
- ⊕ Subcontractor Default

● **Operational Risks & Exposures**

- ⊕ Operations Failure Risk
- ⊕ Construction Defect
- ⊕ Weather Volatility (Seasonality, Cat Risk)
- ⊕ Political Risk (Domestic, International)
- ⊕ Reputational Risk (Company, Product/Service Defamation)
- ⊕ Regulatory Risk
- ⊕ Operational Leverage Risk
- ⊕ Material / Labor Price Risk
- ⊕ Supplier Provisioning Risk

● **Organizational Risks & Exposures (Project Delivery Methods)**

- ⊕ General Construction Contracts (Design-Bid-Build)
- ⊕ Design-Build Contracts (Self-Performed or Subcontracted Design)
- ⊕ EPC Contracts (Engineering, Procurement and Construction)
- ⊕ Construction Management Contracts (CM At-Risk or Agency CM)
- ⊕ Fast Track Contracts (Phased Design and Construction)
- ⊕ Joint Venture or JV / Design-Build Contracts

[TOP](#)

● **Insurable Risks & Exposures**

- ⊕ Workers Compensation and Employers Liability
- ⊕ Commercial General Liability
- ⊕ Commercial Property and Builders Risk
- ⊕ Professional Liability (E&O Coverage)
- ⊕ Environmental Liability (Pollution Coverage)
- ⊕ Contractors Professional Liability
- ⊕ Directors and Officers Liability (D&O Coverage)
- ⊕ Employment Practices Liability (EPL)
- ⊕ Project Specific Coverages (OCP, RRP, PMPL)

- ⊕ Owners and Contractors Protective Liability (OCP)
- ⊕ Railroad Protective Liability (RRP)
- ⊕ Project Management Protective Liability (PMPL)
- ⊕ Subcontractor Default Liability (Bonding Alternative)

This above list of risks and exposures should assist you with your initial risk management planning. Keep in mind that risk management is a continuous process, and risk management assessments need to be done frequently. C-Risk can facilitate this process in order to determine the short-term and long-term impact of an identified risk or exposure, and help clients to integrate risk mitigation and control as part of the client's construction operations and project management procedures.

With the proliferation of design-build as a project delivery system and the exculpatory language used in the terms and conditions of many construction contracts and insurance agreements, contractors need to be extremely cautious in their assumption of risk through the delegation of design responsibility by contractual risk-transfer and/or indemnification provisions.

Please note that this information is provided by C-Risk for general information purposes only and is not intended or does not constitute the rendering of legal advice. Regulatory restrictions or prohibitions on the use of the design-build project delivery approach varies from State to State. Therefore, you should always consult with legal counsel to determine the specific laws or decisions that apply in your State, or in your specific circumstances. It is also recommended that you consult with a competent construction insurance and/or risk management professional in order to ensure that you have adequate coverage prior to the start of any construction project.

For additional information about C-Risk or how we can assist you with your construction risk management program, please contact us at 503-228-0884 or email consulting@c-risk.com.

Risk Management

Construction professionals need to know how to balance the contingencies of risk with their specific contractual, financial, operational and organizational requirements. In order to achieve this balance, proper risk identification and risk analysis is required. The risk management process entails identifying construction risks and exposures, and formulating an effective risk management strategy to mitigate the potential for loss.

Many construction professionals look at risks individually with a myopic lens and do not realize the potential impact that other

associated risks may have on their business operations. Using a holistic risk management approach will enable a firm to identify all of the organization's business risks. This will increase the probability of risk mitigation, with the ultimate goal of total risk elimination.

The Construction Risk area includes sections on Construction Risks & Exposures, Construction Defect Mitigation, with subsections on CD Problem Areas, CD Claims & Litigation, EIFS, and California and Colorado CD Law. The Construction Risk area also includes sections on Risk Management Strategies, Risk Transfer and Risk Financing.

Risk Transfer & Indemnification

The two most problematic areas for construction professionals to effectively manage are contractual risks and the insurability of projects. Contract reviews and insurance facilitation are critical components on an effective risk mitigation and management program. Insurance facilitation assumes the probability that accidents will occur and seeks an efficient way of distributing and/or transferring the risk.

In many instances the ultimate loss is transferred to the insurer, using conventional insurance as the risk transfer method. In other instances, the use of contractual risk transfer methods, utilizing indemnification provisions, are used. However, in most cases, the combination of insurance, risk financing, and contract indemnification provisions are used.

Indemnification can be viewed from the perspective of worker safety and avoidance of accidents, with an emphasis on the exculpatory aspects of indemnification. However, sometimes escaping liability and the associated consequences can create problems with the misuse of indemnification provisions. Particularly, with the broad form or intermediate form, which can exculpate the indemnitee from his/her own wrongdoing or negligence.

Problems with indemnification provisions can occur, for example, if a prime contractor removes the indemnification provision from all of its subcontract agreements. This minimizes the prime contractor's responsibility, and could minimize the incentive for the prime contractor to properly control project operations. This could also increase the potential for injuries to workers at the project jobsite.

[TOP](#)

Construction professionals should be aware that contract indemnification provisions are statutory. They require legal interpretation from the appropriate legal counsel with knowledge of indemnification statutes for the client's specific geographical area, or where the proposed construction project under consideration will be built.

Statutes differ from State to State, and Regulators in each state have very diverse viewpoints regarding contract indemnification provisions.

Many State Regulators do not view indemnification as a method of reassuring a nervous contract drafter, obtaining insurance at the best price, or placing the risk on the party in the contract that can avoid injuries or damages most economically.

Regulators approach their review with a David & Goliath type of measuring stick. They review contract indemnification provisions primarily from an exculpatory aspect, i.e., the means by which the stronger party obtains indemnification from the weaker party. A review of contract case law on indemnification provisions would indicate that a similar metric is used in many jury verdicts.

The information provided on indemnification is intended for general information purposes only and does not constitute, nor is it intended to constitute, legal advice. You should always consult with legal counsel to determine how the specific laws or decisions on indemnification or contractual liability apply in your specific circumstances.

For additional information about C-Risk or how we can assist you with your risk management program, please contact us at 503-228-0884 or email consulting@c-risk.com.

Construction Defect



What is a Construction Defect?

There has been much controversy within the construction industry with respect to, " what is a construction defect?" Much of this controversy has proliferated because of the different viewpoints of the parties who are asking the question, and/or making the determination, e.g., builder, developer, contractor, subcontractor, material supplier, product manufacturer, homeowner, homeowners' association, etc.

There is no short answer to this question and the answer is somewhat multi-faceted, determined by many variables. However, there is a big difference between a construction defect and a nuisance claim, such as a squeaking floor or conditions resulting from lack of maintenance or normal wear & tear. Construction defects could range from complex foundation and framing issues, which threaten the structural integrity of buildings, to aesthetic issues such as improperly painted surfaces and deteriorating wood trim around windows and doors.

The trial courts have recognized that construction defects are tangible and can typically be grouped into the following four major categories:

1. Design Deficiencies - Sometimes, design professionals, such as architects or engineers, design buildings and systems, which from a performance standpoint, do not always work as intended or specified. The motivation for the design may be form, function, aesthetics, or cost considerations, but the completed design could result and/or manifest into a defect. Problems are typically encountered with roof systems, which due to their design complexity, pitched or flat, are prone to leaks. A majority of roofing problems are a direct result of the improper specification of building materials, which can result in water penetration, intrusion or other problems, as well as poor drainage design and/or the inadequacy of structural members, which can result in cracks and deterioration of roofing components and materials.
2. Material Deficiencies - The use of inferior building materials can cause significant problems, such as windows that leak or fail to perform and function adequately, even when properly installed. Leaking windows are a common defect and prevention requires good workmanship. Window leaks can result from many things including, rough framing not being flush with outside at openings, improperly flashed windows, improperly applied building paper, window frame racked during storage/moving, lack of sheet metal drip edge above window header, etc. Common manufacturer problems with building materials can include deteriorating flashing, building paper, waterproofing membranes, asphalt roofing shingles, particle board, inferior drywall and other wall products used in wet and/or damp areas, such as bathrooms and laundry rooms.
3. Construction Deficiencies (Poor Quality or Substandard Workmanship) - Poor quality workmanship often manifests as water infiltration through some portion of the building structure. Cracks in foundations, floor slabs, walls, dry rotting of wood or other building materials, termite or other pest infestations, electrical and mechanical problems, plumbing leaks and back-ups, lack of appropriate sound insulation and/or fire-resistive construction between adjacent housing units, etc.
4. Subsurface / Geotechnical Problems - California, Colorado, and other parts of the country have a significant amount of expansive soil conditions. As a result of this type of terrain, there have been many problems when housing subdivisions and/or developments are built into hills or other sloping areas

where it's difficult to provide a solid and/or stable foundation. If the subsurface conditions in these subdivisions and/or developments are not properly compacted and prepared for adequate drainage, problems will inevitably result, which can include vertical and horizontal settlement (subsidence), movement (expansion), slope failures, flooding, and in extremely wet/rainy climates, landslides, etc. These types of conditions typically lead to cracked foundations, floor slabs, and other damage to a building. A worst-case scenario in some instances could render a building uninhabitable, as well as uninsurable.

The courts have typically used these categories and associated standards to determine culpability for construction defect problems. The metric used to measure is whether the specific condition under review has violated any applicable building codes, is the direct result of construction means, methods, or practices that are below the standard of care in the building industry, resulted from a deviation from the Permitted/approved plans and specifications, or the specific condition is below the reasonable expectation of the home buyer/owner.

Risk Management Strategies



C-Risk services focus on formulation of risk management strategies built around the client's construction business operations. We understand construction risks and exposures, and through collaboration with the client's management team, and insurance agent or broker, we can develop a risk management strategy that will enable the client to effectively identify, quantify and control most construction risks and exposures.

As consultants, we recognize that we are not a substitute for management. Clients will use our services because they periodically require an independent peer review by experienced construction, insurance and risk management professionals. We are problem solvers whose primary role is to educate, advise and help construction industry professionals make more informed decisions in order to mitigate their risks and improve the performance of their construction business operations.

Helping clients to better understand the contracts they execute, and the types of project risk associated with these contracts, is the most important benefit we can provide a client. In many cases, construction contracts will assign responsibility for a particular project risk to other parties. Design responsibility transferred through design delegation, or the contractual assumption of design risk, has become very problematic for contractors. Particularly, with the increasing use of design-build as a project delivery method.

Sometimes the terms and conditions inserted into construction contracts are so ambiguous that it is questionable who bears the risk for an exposure. Some of these risks can be identified in the contract documents, but others are anybody's guess who will ultimately bear responsibility. Several of the more difficult risks to identify, or plan for, are; unforeseen site conditions, inclement weather, labor or material shortages, and strikes.

Construction industry clients need to be very cautious when signing any contract. A comprehensive review of the terms and conditions is required, as well as performing a risk management assessment to identify any exculpatory language, indemnification, and/or risk transfer, risk allocation or risk shifting issues.

As an independent risk management consulting firm, C-Risk provides clients with an objective viewpoint on what risk management strategies are best suited for their individual risks and exposures. We educate clients on the strategies available, evaluate and assist with selecting the ones that are most appropriate, and offer sound advice on the implementation process.

[TOP](#)

Risk Management Strategies include the following:

- **Risk Avoidance**
- **Risk Abatement**
- **Risk Retention**
- **Risk Transfer**
- **Risk Allocation**

Risk Avoidance is just that, avoiding the risk associated with a specific task, activity or project. Often, following the review of a contract, it is determined that a project is just too risky. The client may decide not to bid the work at all, or remove that element of the work from their bid, sometimes using an alternate deduct to delineate the exclusion. Risk avoidance is strictly a business decision, and sometimes a very good strategy if construction documents are unclear, ambiguous or incomplete.

Risk Abatement is the process of combining loss prevention or loss control to minimize a risk. This risk management strategy serves to reduce the loss potential and decrease the frequency or severity of the loss. Risk abatement is preferably used in conjunction with other risk management strategies, since using this risk management method alone will not totally eliminate the risk.

Risk Retention is a good strategy only when it is impossible to transfer the risk. Or, based on an evaluation of the economic loss exposure, it is determined that the diminutive value placed on the

risk can be safely absorbed. Another consideration in retaining a risk is when the probability of loss is so high that to transfer the risk, it would cost almost as much as the cost of the worst loss that could ever occur, i.e., if there is a high probability of loss, it may be best to retain the risk in lieu of transferring it.

Risk Transfer is the shifting of the risk burden from one party to another. This can be done several ways, but is usually done through conventional insurance as a risk transfer mechanism, and through the use of contract indemnification provisions.

Risk Allocation is the sharing of the risk burden with other parties. This is usually based on a business decision when a client realizes that the cost of doing a project is too large and needs to spread the economic risk with another firm. Also, when a client lacks a specific competency that is a requirement of the contract, e.g., design capability for a design-build project. A typical example of using a risk allocation strategy is in the formation of a joint venture.