Risk Management Defined

By John Tawresey, S.E.
Reviewed by the CASE Risk Management Program

This is the first in a series of six articles about risk management. The articles are written to provide the structural engineer with useful information about reducing the probability and severity of claims.

In this first article, risk management will be defined. In addition, it will be argued that every practicing structural engineer, regardless of experience level, should have an understanding of the subject. The next article will describe the responsibilities of the practicing structural engineer, which is a complicated subject and will address the responsibilities from both the theoretical legal perspective and reality. The third article will discuss some easy things engineers can do to reduce the chance of a claim. Selection of projects, contracts and similar basics are the subject. For the most part, structural engineers have successfully modified their practice over the last 10 years to address these issues, but just in case the information will be repeated again. The fourth article is about relating risk management to business practice. Our practice is always a blending of technical performance and business practice. Technical performance and the bottom line are not always compatible and seldom form a homogenous combination. How they mix has a direct connection to the reduction of claims. The fifth article will address project performance. How well we actually service society and our clients and the consequences of our professional style. The series concludes with the most important part of any reduction in claims: technical quality.

Victor O. Schinnerer & Co., one of the largest and most experienced underwriting managers of professional liability and specialty insurance programs in the world, defines risk management as follows:

"*Risk management is the process of minimizing the probability and severity of an unfavorable outcome at the lowest long-term cost to the organization.*"

This is a good start, but it is limited. It is limited because the goal is limited to minimizing cost. This is certainly important, but for our profession, risk management needs a broader definition. It needs a definition that includes the rest of our professional practice, including our obligation to society both through licensing and professional ethics; and, it should include considerations for advancement of knowledge of structural engineering. Managing risk includes managing our own risks, but it should also include managing the risk for our clients, managing the risk to all involved during the construction of our projects and considerations of risk to society as a whole. Risk management needs to be viewed in the broader context of professional practice. As a profession, our practice needs to continuously improve, and improving our risk management techniques is simply a part of improving our professional practice.

For our purpose, let's define risk management as one part of managing our professional work to reduce the risk of an unfavorable project.

Risk management is a complex and dynamic process, often without rules or standards. Making a good decision requires intelligence, experience and often a little luck. During the course of a project, there are many opportunities to change the probability of an unfavorable outcome. Sometimes we may think a situation is increasing risk, only to learn later that it actually reduced the risk, or visa versa.

For example, during a claim review for an insurance program no longer existing, the engineer being reviewed was asked, "Who is your client?" The engineer didn't know. The owner had fired the architect, the engineer's original client who had paid most of the bills, and the engineer continued working on the project through construction (bills unpaid).

A claim review was a one-day brainstorming session where several seasoned structural engineers (seasoned means they had been sued more than once) reviewed the claim against the structural engineer. The interesting part about this story is that when the five reviewers were asked if they had been in this situation themselves (no client), all five admitted that they had. Working without a contract is generally considered a poor risk management practice. But, as it turned out, seeing the project through, even without a client contract, significantly reduced the severity of the claim. Perhaps this is not the conventional approach to managing risk, but nevertheless it was effective.

Another situation occurred when an engineer was asked by a contractor to design bracing to support a historic wall. The project was under construction, and the construction documents clearly required the contractor to take responsibility. The contractor was unable to find an engineer (or didn't want to pay) and complained to both the owner and architect that he could not continue. The engineer stepped in (white hat syndrome) and designed the bracing without a contract with the contractor. It was concluded, in a later construction worker personal injury claim, that the work was accomplished as part of the original contract with the architect. The engineer had not contracted with the contractor and had no job site safety responsibilities. Had the engineer created a second contract with the contractor, he/she would have opened the door to allegations of safety responsibilities and he/she would have created a conflict of interest situation. The conflict of interest is created by working both for the owner through the architect and the contractor.

In both these examples, the exhibited practice was inconsistent with conventional risk management recommendations. These examples demonstrate the complex and dynamic nature of the subject within our broader definition of risk management. In the articles to follow, the broader definition of risk management will be a theme, intended to enhance the understanding and use of the more traditional approaches to risk management.

Why should the average practicing structural engineer learn about risk management? The reason is to be a better engineer. We are professionals. Being a professional means we need to continue to learn and expand our knowledge. A key piece of knowledge is what society and our clients expect from us. We can learn a great deal about what is expected of us by learning the lessons from claims against us.

When confronted with a professional liability claim, most engineers go through the process of hysteria, denial, anger and resignation. During the final phase, most victims will admit they learned something and most of the time they change the way they practice structural engineering in the future. Claims are a powerful feedback about our performance. But it is not necessary to be sued to learn the lessons. The risk management body of knowledge can be used to learn from the experience of others. This is far better than doing it the hard way.

Risk management is one part of managing our professional work to reduce the chance of an unfavorable project outcome. It is a subject structural engineers at all levels should learn as part of their continuing professional practice improvement.▪

John G. Tawresey, S.E. is former CFO of KPFF Consulting Engineers, Seattle Washington and was former President and Claims Committee Chair for the DPIC SERMC program.

Risk Management Recommendation:

Develop an understanding of risk management concepts, and read the next 5 articles on the subject.

Rapid Set®
SINCE 1960
Cement Products

One Hour Concrete Products
Build or Drive on in ONE HOUR!
Durable, Non-Shrink Performance.

Pavement Replacement
Full-Depth Airport & Highway Pavement Produced with Bulk Rapid Set® Cement.

Non-Shrink Grout
Precision Installations with Minimum Downtime. The Fastest Strength Gain of Any Precision Grout.

Shrinkage Compensating Cement
Designed to Reduce Drying-Shrinkage Cracking on Bridge Decks and Slabs on Grade with up to 150' Joint Spacing.

Available Nationwide in Bags & Bulk
Call for a dealer near you: 800-929-3030

See our full line of cement products at
rapidset.com

ADVERTISEMENT – For Advertiser Information, visit www.structuremag.org