

Risk Management

The Simple Things to Do

By John Tawrescy

Reviewed by the CASE Risk Management Program

The subject of this third article is the simple things structural engineers can do to reduce the chance of a claim. Originally it was planned for the article to focus on the selection of projects, contracts and other similar basic risk management tools. Instead, this article focuses on even simpler and easier things to do. Contracts etc. will come later.

In the previous article (*STRUCTURE*®, February 2007), the subject was the responsibilities of the structural engineer. An example claim, involving cracked brick veneer resulting from the reshores being left in place during laying of brick, was presented. The structural engineer took a photo of the masons laying the brick with the reshores in place. Did the structural engineer practice below the standard of care by not recognizing that the brick would crack after removing the shoring?

You may recall that, to practice within the standard of care, the structural engineer must exercise the degree of care and skill that society reasonably expects of a prudent and careful structural engineer working under similar circumstances.

Over the years, the reshore photo has been passed around the room during seminars. The question was asked, "Why did the brick crack?" Typically 2 out of 50 identify the problem with the reshores. That is only 4%. By that measure, the structural engineer did not practice below the standard of care. Nevertheless, he still paid. The reality is that, once a claim is filed, the standard becomes the *You Should Have Known Rule*. If in hindsight you could have foreseen and prevented the unfavorable outcome, then you will likely be held responsible.

Could the situation have been avoided through application of risk management techniques? Probably not. But now you know that if you see masonry being laid on a building with reshoring still in place you should do something.

This article is about the simple things we can do to reduce unfavorable project outcomes. One simple thing to do is what was just done – share experiences. Too often project problems are hidden and not discussed. The reasons are obvious, but the losses from making the same mistakes over and over are enormous. Sharing experiences is a simple thing to do, but often not easy. No one wants to admit to

making mistakes. One of the main purposes of the CASE RMP Convocations is to share these experiences. It is recommended that you attend (www.acec.org/rmp).

But, there are simple and easy things we can do. In the previous article, we identified the four conditions for liability and negligence: (1) a duty, (2) a violation of that duty, (3) a proximate cause, and (4) damages. There is a fifth: In most claims against structural engineers, someone is angry enough to take action. It could be the client, contractor, owner or someone else.

Therefore, one of the simple and easy things to do is to not make anyone angry. Do not make your client angry. Do not make the contractor angry and don't anger the owner.

There are lots of ways to anger your client. Here are some examples. You can easily anger your client by not returning his/her phone calls. You could be late to all the project meetings or not show up at all. You could send another engineer who doesn't know anything about the project, or during the meeting, you could work on your computer or let them know that you think the proposed design is stupid. Or, you could stop work on the project because of some misunderstanding

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about your scope of work or any other reason. It is generally not advisable to stop working on a project, under almost all circumstances.

You could sue your client for not being paid or place a lien on the property to assure the owner knows you are there. Suing the client usually results in claims coming back the other way. There are more sophisticated ways to collect fees, which will be covered in later articles.

What are the ways to make a contractor angry? Returning shop drawings late and affecting the construction schedule is a common one. Revising the design after the contractor has committed to the cost. Telling the contractor that an issue isn't your problem. Telling everyone else the contractor asks stupid questions and is incompetent. The list can go on and on. The risk management message is that if someone gets mad, you would be wise to fix the situation. An apology may not be easy, but it can be an effective risk management tool.

In the traditional project delivery system, where the architect is working for the owner and preparing the contract documents for bidding, there is a concept called the terrible triangle. The triangle consists of the owner, the architect and the contractor. If two, any two, gang up on the third, there is trouble ahead. Extra attention to project management and documentation will be a good idea. If they are mad at each other, you will likely be sucked into the claim. Establishing good relationships with the architect, the owner and the contractor will go a long way toward avoiding claims and unfavorable projects.

Another simple and easy thing to do is to purchase errors and omission insurance. At first glance, you might ask, how does purchasing E & O insurance reduce the chance of an unfavorable project outcome? Doesn't having insurance make me a target?

Do we purchase E & O insurance to protect ourselves, or to protect our clients? We purchase it for both, to protect ourselves and to protect our clients. Protection for our clients can mitigate an unfavorable situation by providing the resources necessary to correct a situation. That is what insurance is for. The other side is protection for us. While not a risk management issue per se, nevertheless,



Courtesy of www.sxc.hu

the engineer signing plans should be sure the firm has adequate insurance to protect his/her own personal assets. This can become a sticky issue if firm coverage is not there or is inadequate.

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But, most importantly, insurance companies typically provide risk management advice and are available to assist in any given situation before a claim occurs. Drawing on the experience of the claims department and insurance agents is a valuable resource that can be of great help.

In the spirit of the first simple thing to do, sharing experiences, here is another one.

One of the most classic causes of a claim is the *cosmetic crack letter*. There are many claims in this category, but one that is most memorable was a small retail project, wood frame, over a concrete parking garage. The deck was post-tensioned. The project was in a high seismic zone. As often happens, the deck cracked. Customers were complaining about the paint on their cars being ruined due to water leakage through the cracks. The owner

asked the engineer to come out and look at the cracks. The cracks were limited and probably resulted from improper concrete curing. The engineer wrote a letter describing the many possible reasons for the concrete cracks (two whole pages) and concluded that the cracks were not structural, only “cosmetic cracks” and therefore not a problem.

Predictably, the owner hired another structural engineer, a firm that makes most of their fee in forensic work. This structural engineer agreed the cracks did not pose a structural problem, proposed an epoxy injection repair and additionally discovered that the seismic design of the shear walls and foundation was inadequate. The engineer recommended strengthening the building. A difference of opinion on seismic design ensued with “kick back” and “rocking” foundations becoming familiar terms to the attorneys involved. The expert and legal costs were large, and the engineer eventually settled for a mid-six figure amount. The building was never strengthened.

Risk Management Recommendation:

Share claim experiences with other engineers. Don't make people mad. Have adequate insurance, attend the RMP convocation and avoid the *cosmetic crack letter*.
Read the next three articles.

In conclusion, the simple things to do are to share experiences and mistakes with others (attend the RMP Convocation), work towards achieving happy clients and other participants in the process (don't make anyone mad), use the risk management resources the insurance companies offer, and finally, don't write the “cosmetic crack” letter. ■

John G. Tawresey S.E., is a Vice President of KPF Consulting Engineers, Seattle Washington.

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