



Best Practices

Resilient Design and the Evolving Standard of Care

By Brett Stewart, J.D.

Despite the politicization of the climate change conversation, there is overwhelming scientific evidence that our climate is altering in a way that is placing added stress on communities, infrastructure, and the general health and well-being of society.

Structural engineers need to be mindful of the potential for increased liability exposures due to a less-predictable environment. The AXA XL Design Professional unit expects a growing number of lawsuits against design professionals from clients who claim that their project should have been able to withstand foreseeable extreme weather events. Many of these lawsuits will claim a breach of the professional standard of care.

For structural engineers, this could translate into claims arising out of unanticipated wind and snow loads on buildings as well as damage to bridges caused by intense stream flows.

Engineering consultants should consider code requirements as a starting point for their design criteria and incorporate anticipated climate change impacts into their designs more proactively than in the past. Some engineers may take issue with what amounts to a departure from largely relying on historical data to inform their design decisions. However, they need to consider that the standard of care is ultimately determined by (1) what they agreed to in their contract, and (2) the conclusions of a trier of fact; i.e., a disinterested jury with potentially little or no engineering experience. Merely complying with codes or government-mandated design criteria does not necessarily mean that the standard of care was met. Instead, the standard of care is a concept that evolves and can be influenced by case-specific facts. Sometimes the standard of care dictates design solutions that exceed clearly defined and accepted code provisions – for example, for seismic, wind, and occupancy live loads. Offering those solutions to the client not only leads to more resilient and longer-lasting structures, but it also reflects the prevailing standard of practice.

Many design professionals have expressed concern about how to communicate the need for appropriate proactive design to a client. They wonder, too, what they should do if a client refuses to follow their advice. The author's firm recommends the following best practices:

- 1) **Insist on early dialogue with clients regarding program requirements.** This can be a challenge with public agencies who issue RFPs with set design criteria. Firms can respond to RFPs within the design criteria. Still, it is important to recommend, where appropriate, alternative designs for more robust projects that will last longer in light of changing environmental conditions. Sometimes, this conversation can be reinforced by demonstrating lifecycle cost savings that can be realized with a design that anticipates damage caused by extreme weather events. AXA XL has heard from insureds that clients will later say that what they really needed was for the engineer to tell them what they should have done and to prevent them from doing something that was a bad idea. Sometimes, this equates to recommendations that exceed mere code compliance.
- 2) **Understand that clear and effective communication and documentation are critical** to establishing a record of what the engineer recommended. Engineers will need to “connect the dots” and tell clients why something is a good or bad idea and what can happen, in the engineer's opinion, if they do not follow the engineer's advice; e.g., an increased risk of loss resulting in higher lifecycle costs, loss of use and business interruption, or even potential harm to the public. If a client refuses to follow an engineer's advice, there should be a clear paper trail documenting the decision in writing to the client – typically as a written follow-up to a conversation.
- 3) **Ask for a waiver and indemnity.** If a client refuses to follow the engineer's advice, and if that decision does not place the engineer in any ethical peril, the engineer can request that the client waive any claims against them arising out of the client's decision to proceed against the advice of the engineer, and to defend and indemnify the engineer against any third-party claims arising from that decision. While it is always a good idea to have this language

(sometimes known as a self-executing indemnity) in the contract with the client, it is not always feasible. Many clients will refuse. However, just by asking for the waiver and indemnity, the engineer is establishing a paper trail and creating what amounts to a trial exhibit that would demonstrate to a jury that the engineer felt the refusal to follow their advice was important...and wrong.

- 4) **Decline to complete professional services.** If the client's refusal to follow the engineer's advice is a *really* bad idea (e.g., an obvious life-safety hazard), the engineer should consider suspending or terminating design services – admittedly a drastic measure. Having protections written into the contract at the outset are helpful but, again, not always feasible. If something is a life-safety hazard, the engineer must communicate their objections to the client, both verbally and in writing, clearly documenting what the hazard is and why the engineer must refuse to complete their services.
- 5) **Remember ethical obligations.** Engineers have an ethical obligation to promote public health, safety, and welfare. Be mindful of actions that can undermine this obligation, such as doing whatever it takes to please a client or signing agreements with an elevated standard of care that puts the client's interest above all else; i.e., a fiduciary duty. Consultants should not be afraid to cite their ethical obligations as a reason for undertaking or refusing to undertake a specific course of action.
- 6) **Consider the competition.** Finally, consultants should weigh what other design professionals are doing on similar projects in the area – an important point when conducting a standard of care analysis. ■



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