
NAVIGATING THE CLIMATE CHANGE CHALLENGE: AN EVOLVING STANDARD OF CARE FOR DESIGN FIRMS



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INTRODUCTION

In an era where climate change poses significant *future* uncertainty, it also poses more *immediate* physical risk challenges, placing design firms in a complex dilemma of finding ways to integrate future-forward climate science into building science at a time when merging the two is still very much untested. This publication delves into the emergent need for these changes in design practices, the evolving industry standard of care, legal precedents shaping liability exposures in the climate change context, and strategies for design firms to navigate a path forward. Our goal? To equip design firms with insight to innovate and address societal needs, as well as mitigate liability risks while also positioning firms favorably in a market that increasingly values ESG financial principles of resilience and foresight.



THE CHALLENGE OF CLIMATE CHANGE

The reality of climate change is no longer a distant warning, but a present danger, as underscored by the record-breaking climate and weather disaster events of 2023. With total costs reaching \$92.9 billion, the financial, social, and environmental impacts are undeniable. Projections by climate scientists foretell that even in the best-case global warming scenarios, natural hazards will become increasingly severe and frequent in the near term.

For design professionals, this presents a critical challenge. Buildings and infrastructure designed today must endure under tomorrow's climatic conditions. However, planning and building practices in the US, along with population growth, have largely not accounted for future climate conditions, setting up vulnerabilities for communities all across the country. With at least [10% of the US population living in 500-year flood plains](#) and [FEMA estimating that 65% of communities lack modernized building codes](#), the risks of increasingly severe weather events are further exacerbated. Because of these challenges, using future-forward climate projection data in design practice, even if not yet mandated, may be advisable as a best practice, as evidenced by recent updates in standards like the [Minimum Design Loads and Associated Criteria for Buildings and Other Structures](#), published by the American Society of Civil Engineers, which now includes considerations for some climate change impacts and is on the cusp of moving further in that direction.



NAVIGATING THE SHIFTING CURRENTS: THE EVOLVING STANDARD OF CARE

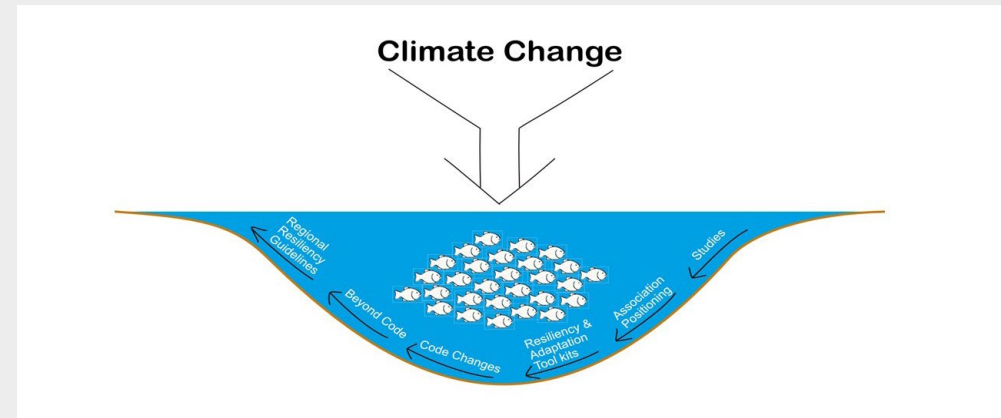
In the vast “ocean” of the design and construction industry, design firms are like a school of fish swimming in the currents of climate change—a force that both guides and challenges their direction of travel and the boundaries in which they safely swim. The standard of care, traditionally a beacon for safety, consistency, and reliability, is the boundary in which these fish swim. As the climate shifts weather patterns and natural conditions, the boundaries (or standards) in which they swim also shifts.

Picture this (figure 1 to the right): At the front of the school of fish, you have the innovators—firms that swim ahead, who are agile and responsive to the changing tides brought on by climate change. They explore new depths and dare to venture into uncharted waters, setting new directions for sustainability and resilience in design. Their bold moves create ripples that define new boundaries for the entire school.

The followers maintain cohesion and direction set by the leaders. These firms keep pace within the established currents of practice, ensuring they remain relevant and competitive. They are watchful and adaptive, taking cues from the pioneers, integrating new standards of care into their workflows, and staying within the protective shoal of industry norms.

This “schooling fish” metaphor captures the dynamic of the design industry’s standard of care as individual firms navigate the evolving climate landscape. The dynamic is fluid—some firms lead, others follow, but *all* must remain acutely aware of the boundaries around them to stay within a reasonable standard of care. This push and pull of innovation and adaptation are the twin forces that keep the school moving forward, ensuring that even as the waters change, the collective continues to thrive.

FIGURE 1: STANDARD OF CARE METAPHOR IN CLIMATE CHANGE CONTEXT.



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The industry adaptation process that is well underway is evidenced by a multitude of factors, including new resilience and climate projection studies published in 2022: [Resiliency in the Built Environment Research Report](#), by The American Institute of Architects (AIA) and Owens Corning, and [Climate Forward? How Climate Projections Are\(n't\) Used to Inform Design](#), by HGA and the University of Minnesota Climate Adaptation Project. These studies highlight ethical obligations endorsed by professional associations and proactive design approaches that exceed code requirements.

The above studies revealed a few notable trends in practice:

1. architects, unlike contractors and clients, do not believe that following code makes a building resilient enough for the location in which the project sits;
2. there's recognition that site exposure to natural hazards and climate impacts is one of the more important resiliency considerations of a project among many resiliency considerations; and
3. more than 33% of architect respondents rely on climate projection data and reported that 25% of projects were designed to go beyond code requirements.

These takeaways reveal that the design industry may not yet have pivoted fully toward resilient design as integral to responsible design practice, but it's certainly leaning that way.

Similarly, the *Climate Forward* study found that about 33% of respondents, which included a broad array of industry stakeholders, including architects, engineers, planners, and sustainability specialists, are using climate future-forward data to inform design and planning. The biggest use case for climate projection data is to inform clients, climate risk assessments, and site/building design strategies. All of these developments are reshaping the industry's standard of care and accepted practices, making it critical for the followers in the school of fish metaphor (described above) to look up and pay careful attention.

INSIGHT INTO THE LEGAL LANDSCAPE AND INDUSTRY LIABILITY

Jurisprudence illuminates the evolving legal landscape concerning climate change and design liability. Courts and legal scholars in recently published law journals are increasingly recognizing the importance of foreseeability in evaluating negligence and liability in the context of climate change. In addition, a review of case law, such as *L.H. Bell & Associates, Inc. v. Granger*, *Barnett v. City of Yonkers*, and *Conservation Law Foundation v. ExxonMobil Corp.*, provide instructive insight into how courts analyze the responsibilities of design professionals. These cases, among many others that were reviewed for this publication, emphasize that adherence to standards and codes alone may no longer suffice in a world where natural hazards simply do not follow historical norms.

Indeed, the concept of “stationarity,” which assumes that natural conditions and variability in weather generally remain within a predictable envelope of highs and lows, appears to be becoming a relic of the past. Legal scholars have suggested that courts adopt a new foreseeability principle in assessing responsibilities and liabilities, where “*non-stationarity*” should be assumed by private actors as foreseeable, meaning unprecedented extremes and novel conditions will become routine. This legal debate, along with case law, suggests that it would be wise for design professionals to consider a more proactive practice approach, especially on projects that may be more vulnerable to physical risks, such as flooding, coastal inundation, extreme wind, fire, and heat stress.

Let’s look at some case studies to understand how courts may apply foreseeability principles in the context of climate change.



CASE STUDIES

L.H. Bell & Associates, Inc. v. Granger



The case of [*L.H. Bell & Associates, Inc. v. Granger*](#) is an interesting case study for engineering and other design firms because it offers insight into how courts think about the responsibilities of design professionals in the context of flooding. In this case, the engineering firm designed a bridge to withstand a 25-year flood as per FEMA's guidelines at the time. Despite the bridge surviving a severe flood that was later classified as a 100-year event, the firm was found negligent for failing to foresee that its design features (or lack thereof) created a risk of flooding to adjacent properties. The court's decision hinged on the principle that engineers must provide services "reasonably and without neglect," extending beyond the four corners of the contract for services to a broader environmental mandate of anticipating the implications of engineering design to adjacent properties. The case sets a precedent that the standard of care for engineers (and potentially other design professionals), depending on the jurisdiction, may include anticipating and planning for the impact of climate-related events not just related to the contracted project, but also adjacent landowners, emphasizing that contractual flood designations are not definitive in evaluating liability.

Barnett v. City of Yonkers



In the [Barnett](#) case, the issue of professional liability was examined in the context of evolving scientific knowledge and its impact on design decisions. An architect specified the use of asbestos in the design of a school during the 1950s, a common practice at the time. The lawsuit arose after a student who attended the school during the 1960s died of mesothelioma in 1986, prompting a review of the architect's liability given the emerging evidence of asbestos hazards. The court concluded that the architect was not liable as the dangers of asbestos were not widely recognized or documented in publications until after the school's design and construction. This decision reflects a judicial understanding that professionals are expected to apply current knowledge and standards at the time of design.

This case becomes particularly instructive for design firms concerning climate science and foreseeable physical impacts near and long term. It demonstrates that courts may hold professionals to the standards of scientific knowledge available at the time of a project's conception. It illustrates the increasing expectation that design professionals should incorporate contemporary understanding on issues that can impact the built environment and its occupants. The case also suggests that as design professionals better understand and acknowledge the link between human activities and negative impacts on the Earth's systems, natural resources, and society, courts might find liability against professionals who neglect to consider climate science given the wealth of information now available on the subject.

While it is unknown yet the extent to which a court might expect climate science to be integrated into building science, it's reasonable to imagine that there will be an expectation that *some level* of consideration be given. What that looks like should be considered through the lens of the reasonableness standard.

Conservation Law Foundation v. ExxonMobil Corp.



[This case](#), including the hearing transcripts which were acknowledged as the judge’s “record of decision,” centered on allegations that ExxonMobil failed to account for climate change in its operations of a petroleum storage facility. One core issue of deliberation was the facility’s pollution permit, which required a stormwater pollution prevention plan that adhered to “good engineering practices” and would be reviewed and updated on an annual basis. The term “good engineering practices” was left undefined in the permit, forcing the court to interpret that “good” practices included considerations of foreseeable severe weather events, including those caused by climate change, signaling that engineering firms, at least in this court’s view, are expected to stay informed about and integrate climate science into design considerations. While the case settled before trial in December 2023 after more than seven years of litigation, the court’s view on “good engineering practices” offers a compass that could help guide design professionals who are looking to understand the boundaries of the standard of care in the context of climate change.

Notably, the court made clear that while the permit did not expressly require that ExxonMobil account for “climate change,” they still had a responsibility to consider future weather conditions, regardless of whether they were attributable to climate change or not, stating:

...EPA guidance and practices of engineers in the field as alleged are sufficient to state a plausible claim that “good engineering practices” include consideration of foreseeable severe weather events, including any caused by alleged climate change.

In coming to the above conclusion, the court acknowledged as foundationally factual that foreseeable severe weather events are certain or substantially likely to occur near term based on evidence presented by the plaintiff: the [Massachusetts Climate Change Assessment](#) and [Local Hazard Mitigation Planning, Intergovernmental Panel on Climate Change](#) reporting, as well as US-based reports from the [Union of Concerned Scientists](#) and [National Oceanic and Atmospheric Administration’s reporting and modeling](#).

The proceedings and rulings in the *ExxonMobil* case provide instructive insight into how design professionals may be increasingly expected to anticipate and incorporate robust climate considerations into planning, design, and construction. For curious minds, the case also illustrates how plaintiffs’ attorneys might frame a legal complaint against an engineering firm, or any design firm for that matter, along with supporting arguments and evidence that could be influential in court decision making.

The surging trend of climate litigation, evidenced by the *ExxonMobil* case and related cases against major oil companies in other states, reflects a broader litigation movement towards using the courts as a hammer to prompt climate adaptive action by industry stakeholders.

MITIGATING LIABILITY RISKS: SHIFT, ADAPT, AND COMMUNICATE



To navigate the complex intersection of climate change impacts, legal liability, and changing industry standards, design firms should adopt strategic risk management practices. From a contractual risk perspective, incorporating informed consent provisions, disclaimers, and waivers in professional services agreements can help appropriately shift project responsibilities and manage the limitations and uncertainty of predicting future climate impacts, at least with regard to claims from the client. Mitigating third-party claims is best addressed through indemnification and defend provisions from clients.

Adapting practice to include proactive measures can also help mitigate risks. For example, analyzing recent climate change projection publication insights (e.g., [The Fifth National Climate Assessment](#) and [AR6 Synthesis Report: Climate Change 2023](#)) gives firms baseline knowledge of what climate scientists are projecting near and long term. Sharing that knowledge with clients in early contract scoping discussions helps them understand the risks and return on investment. Engaging with climate modeling tools that can downscale climate variables to the project level for useful design decision making may also be an increasingly important act of due diligence.

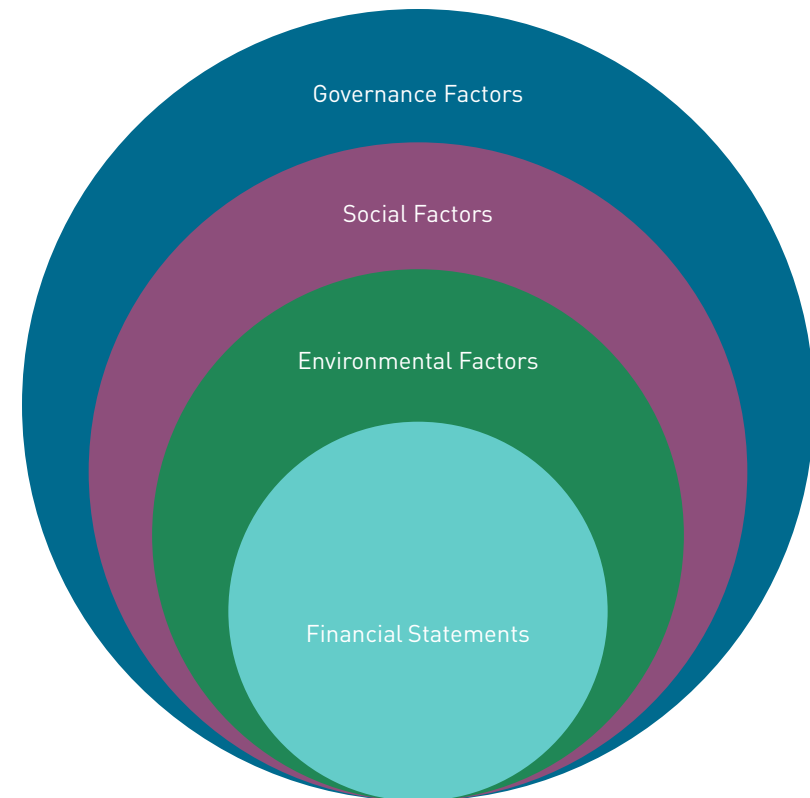
It is crucial for design professionals to institutionalize clear communication with clients early on in project planning around climate risks and adaptation strategies. Documenting these discussions can also provide a layer of protection against future claims of negligence or failure to adapt. Indeed, it is hard to imagine any court of law or jury, when considering evidence of professional negligence, ignoring a design firm's early attempts to integrate climate adaptive measures or to hire subconsultants to explore the possible need. Establishing a clear record of due diligence and professional recommendations can be critical professional practice strategies in defending against any future allegations of professional negligence following adverse weather events. Additionally, staying abreast of code changes, industry best practices, and [legal developments](#) in climate litigation will enable firms to align their practices with the evolving standard of care.

As design firms navigate the complexities of climate-induced risks and shifting legal landscapes, the role of environmental, social, and governance (ESG) criteria becomes increasingly pertinent. Managing these risks is not only about adhering to new standards and avoiding legal pitfalls; it's also about demonstrating to investors and stakeholders that the firm operates sustainably and responsibly across ESG dimensions. This alignment with ESG frameworks can help mitigate financial risks while also enhancing the firm's reputation and competitive edge.

In the context of risk management and market positioning, it is important to understand and articulate the distinction between ESG practices and sustainable design. Despite prevalent misconceptions, ESG is not synonymous with sustainable design, but it represents a broader financial risk framework used by financial institutions. It defines "sustainable *business models*" and demonstrates that a firm manages ESG risks effectively. By showcasing robust ESG practices, design firms not only prove their resilience and sustainability in operations, but also align themselves with the criteria that financial institutions use to assess long-term viability in the face of emerging, disruptive risks.

Furthermore, it's important to acknowledge that while the term "ESG" has become politicized in the US, potentially leading to a change in nomenclature, the underlying principles remain steadfast in the financial sector. Despite the phenomenon of "green hushing," where institutions might downplay their ESG activities to avoid political or public backlash, the commitment to integrating ESG risk management strategies continues unabated. Design firms should remain adaptable to these changes in terminology, recognizing that the core principles guiding financial and risk assessment practices related to ESG will persist, regardless of the label. This resilience in terminology mirrors the adaptability required to navigate the evolving landscape of climate change and environmental responsibility.

FIGURE 2: ESG: ENHANCED FINANCIAL RISK ASSESSMENT



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CONCLUSION

The intersection of climate change, evolving legal standards, and the shifting industry standard of care presents both challenges and opportunities for design firms. By embracing adaptability, resilience, and proactive risk management strategies, firms can navigate these complexities effectively. This not only minimizes liability risks, but also positions firms as forward-thinking leaders capable of designing built environments that stand the test of time and climate change impacts.

As the industry moves toward a new normal, the integration of climate considerations into every aspect of design and construction becomes not just beneficial, but imperative for the sustainability and resilience of our communities.



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