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Flirting with Disaster

Illustration: Chad Crowe

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The Potentially Catastrophic Design Error and the Ethical Response

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Despite advances in design and more stringent regulations, errors persist in the design process.[1] The discovery of a potentially catastrophic design error after the completion and delivery of a project presents an array of ethical and legal issues for the design professional and attorneys who represent them. Ultimately, the questions before the design professional are whether he or she has an ethical or legal duty to warn of the error, and what must be done to satisfy that duty.

Discovery of the Design Error and Response

The first step in determining whether a design professional has a duty to disclose or warn of a design error is to determine whether a design error does, in fact, exist. Given the complexity of many of today's designs, it may not always be clear that an actual error is present in the design. It is therefore incumbent on the design professional to take steps to confirm the existence of the error. This may range from simply reviewing one's work, consulting with appropriate members of the design team, or engaging an outside expert to conduct a peer review of the design. If this investigation confirms the existence of a design error, then the design professional must ascertain the nature and severity of the error. A number of factors should be considered, including, but not limited to, whether: (1) the error poses an actual or potential threat to human health and safety; (2) the risk of harm is imminent or remote; (3) the error is isolated or systemic; and (4) the error is confined to a single project or affects multiple projects or owners. The assessment of these factors, along with others, will determine the ethical and legal obligations of the design professional in determining the most appropriate strategies to contain and mitigate the errors.[2]

Ethical Obligations

A number of professional organizations have promulgated ethical codes and rules of practice to provide guidance and direction to members of their professions.

ASCE and AIA

The American Society of Civil Engineers (ASCE) and the American Institute of Architects (AIA) have adopted codes of ethics that apply to their members. While these two sets of codes of ethics do not establish a legal duty,[3] they are reflective of what the ASCE and the AIA expect from their members and may be indicative of what an expert witness may opine is the standard of care when evaluating the alleged negligence of a design professional. The ASCE Code of Ethics codifies this comprehensive obligation as the first canon for professional conduct, "Hold Safety Paramount": "Engineers shall hold paramount the safety, health and welfare of the public."[4] Canon 1(a) of the ASCE Code of Ethics similarly states that "[e]ngineers shall recognize that the lives, safety, health and welfare of the general public are dependent upon engineering judgments, decisions and practices incorporated into structures, machines, products, processes and devices."[5] This canon clearly applies to public safety, but the inclusion of the word "welfare" likely expands the scope of this duty to nonsafety situations.

ASCE commentary supports this expansion. Canon 1(a) "implies more than a mere abstract awareness of the engineer's duty to the public; it requires the engineer to be untiringly vigilant in preserving the interests of the men, women, and children whose lives may be affected by the engineer's actions."[6] Also, the duty to hold paramount the public welfare means "taking steps to address any threat to the public the engineer perceives in rendering his or her services. In cases in which responsible parties fail to act even when advised of the threat, the engineer may have to go further and disclose the matter in a public forum or report it to the authorities."[7]

Finally, ASCE Canon 1(c) states that "[e]ngineers

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whose professional judgment is overruled under circumstances where the safety, health and welfare of the public are endangered, or the principles of sustainable development ignored, shall inform their clients or employers of the possible consequences."[8] The ASCE does not overtly define what parties may be "overruling" an engineer's professional judgment that would trigger the obligation of engineers to inform their clients or employers of the possible consequences, but the ASCE appears to include at least an engineer's direct superior.[9]

In 2009, at the ASCE's annual conference, ASCE members participated in a workshop entitled "Ethics: The Keystone of Civil Engineering Leadership," in which ASCE members were presented a hypothetical scenario, asked to consider the ASCE Code of Ethics, and polled for their preferred course of action among six options.[10] In this scenario, an engineer who is designing an equalization tank in a municipal wastewater treatment plant advises the town's sewer commissioner that it may be necessary to make the treatment room explosion-proof based on the National Fire Protection Association (NFPA) code.[11] The sewer commissioner "reacts angrily to the prospect of additional cost and delay to the project," and the county fire official advises that the room is already explosion-proof.[12] Despite the fire official's statement, the engineer surveys the treatment room and notes that several pieces of electrical equipment "show no signs of having been made explosion-proof."[13] The ASCE members discussed the scenario and decided that ASCE Canon 1—to hold safety paramount—should primarily guide the engineer's next steps.[14] Ultimately, more than half of the ASCE members in attendance determined that the engineer "should investigate the matter further, consulting the NFPA code and possibly involving a more experienced third party to inspect the treatment plant and to provide input. If the room is not in compliance, [the engineer] should develop various solutions. This extra work should be billed to the project regardless of the effect on the project's budget."[15] The ASCE members clearly believed that the fire official's statement marginally affected the engineer's ethical duty to proactively determine whether the treatment room was safe and code compliant.

In comparison to the ASCE Code of Ethics, the AIA Code of Ethics sets architects' "Obligations to the Public" as Canon II and provides much more specific direction in Rule 2.105:

> If, in the course of their work on a project, the Members become aware of a decision taken by their employer or client which violates any law or regulation and which will, in the Members' judgment, materially affect adversely the safety to the public of the finished project, the Members shall:
> (a) advise their employer or client against the decision,
> (b) refuse to consent to the decision, and
> (c) report the decision to the local building inspector or other public official charged with the enforcement of the applicable laws and regulations, unless the Members are able to cause the matter to be satisfactorily resolved by other means.[16]

The AIA has evaluated the responsibility of its member architects under its ethical canons promoting the protection of public safety. In one decision regarding the AIA Code of Ethics, an architect submitted a zoning board application to elevate a house with a significant quantity of additional fill, proposing to raise the property's grade above a neighbor's property.[17] While the application was pending, the regrading of the lot began, and the architect saw the fill in place.[18] Subsequently, the city issued a stop work order and a notice of violation to the contractor for commencing land balance and fill operations before a "site drainage plan" was submitted to the zoning board, and the architect "informed her clients and the contractor that they had to 'take care of this.'"[19] Ultimately, the neighbor's property flooded.[20]

The AIA determined that the architect violated several rules of the AIA Code of Ethics.[21] First, the architect violated Rule 2.105 by failing to report the client's safety violation to the city's director of public service and building office before the city issued the stop work order and notice of violation.[22] Next, the architect wantonly disregarded the neighbor's rights despite AIA Rule 2.104 that "Members shall not engage in conduct involving . . . wanton disregard of the rights of others" because there was a significant risk that the neighbor's property would flood based on the architect's design.[23] Furthermore, the architect failed to obtain the neighbor's consent in violation of AIA Rule 3.201 that "[a] Member shall not render professional services if the Member's professional judgment could be affected by responsibilities to another project or person . . . unless all those who rely on the Member's judgment consent after full disclosure."[24] The commentary to the rule clarifies that this rule encompasses conflicts between the architect and others who may be affected by the architect's professional decision.[25]

In its decision, the AIA recognized that Rule 3.201 obligates architects to determine who qualifies as "affected" by the architect:

> To read into Rule 3.201 a requirement that an architect notify everyone who might be adversely affected by design decisions would be to demand the impossible. However, in the circumstances presented by this ethics case, the immediate neighbors . . . were directly affected by the design put forward by the Respondent to such an extent that she had an obligation to them under this rule. Her design required adding a very significant quantity of fill to create a large "plinth" upon which the new house and associated garages and drives would be placed, a design approach that could have affected neighboring property in multiple ways.[26]

National Society of Professional Engineers

The National Society of Professional Engineers (NSPE), in the preamble to its Code of Ethics for Engineers, considers the health and safety of the public to be of paramount importance, stating the services of engineers "must be dedicated to the protection of the public health, safety, and welfare."[27] It codifies this obligation in Canon I, which explicitly requires that "[e]ngineers, in the fulfillment of their professional duties, shall . . . [h]old paramount the safety, health, and welfare of the public."[28] To assist engineers in meeting this ethical obligation, Canon II provides direct guidance to engineers, stating:

> Engineers shall hold paramount the safety, health, and welfare of the public.
>
> a. If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.
>
> b. Engineers shall approve only those engineering documents that are in conformity with the applicable standards.
>
> c. Engineers shall not reveal facts, data, or information without the prior consent of the client or employer except as authorized or required by law or this Code.
>
> . . . .
>
> f. Engineers have knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when relevant, also to public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.[29]

American Council of Engineering Companies

In 1980, the American Council of Engineering Companies (ACEC) adopted its Professional and Ethical Conduct Guidelines. The fundamental canons state the first priority is that "[c]onsulting engineers, in the fulfillment of their professional duties, shall . . . [h]old paramount the safety, health and welfare of the public in the performance of their professional duties."[30] The accompanying rules of practice provide the following guidance to engineers:

> 1. Consulting engineers shall hold paramount the safety, health and welfare of the public in the performance of their professional duties.
>
> a. Consulting engineers shall at all times recognize that their primary obligation is to protect the safety, health, property and welfare of the public. If their professional judgment is overruled under circumstances where the safety, health, property or welfare of the public are endangered, they shall notify their client and such other authority as may be appropriate.
>
> b. Consulting engineers shall approve only engineering work which, to the best of their knowledge and belief, is safe for public health, property and welfare and in conformity with accepted standards.[31]

Primary Obligation—Protect the Health, Safety, and Welfare of the Public

There is little doubt that the primary ethical obligation of design professionals in providing professional services is to protect the health, safety, and welfare of the public. This obligation is overarching and supersedes all other ethical obligations.

One of the most famous cases illustrating the ethical dilemmas that confront design professionals faced with a potentially calamitous design error involved the Citigroup Center in New York City.[32] The architect was Hugh Stubbins, and the structural engineer was William LeMessurier.[33] The structural design incorporated a number of new and innovative concepts.[34] A year after construction was completed, LeMessurier recalculated the wind loads on the building, which included quartering winds that had not been considered in his original design.[35] LeMessurier's recalculation revealed that with a quartering wind, the wind loads increased by 40 percent and the overall loading at all construction joints increased by 160 percent. Thus, in certain severe, but possible, wind conditions, the building could collapse.[36] The collapse would not only jeopardize the building occupants, but also cause a "domino" effect that threatened surrounding buildings and structures.[37]

LeMessurier advised Stubbins of the problem.[38] They then disclosed the problem to the client and city engineer.[39] After considering the problem, the group agreed to a repair plan involving remedial construction that could be accomplished over the next few months.[40] During this time, a storm-monitoring system and a contingency evacuation plan were developed.[41] The client and Stubbins strongly agreed that the problem should be kept secret, while LeMessurier was confident that the remedial construction would completely rectify the potential problem and that the evacuation plan had a reasonable chance of success.[42] The city engineer, however, had concerns for the public, especially the office workers, and the right to know.[43] Stubbins and LeMessurier maintained that this right was superseded by the consequences of a possible panic resulting from any notification to the public.[44]

In reviewing the case, the NSPE Board of Ethical Review considered two issues: (1) whether it was ethical for the structural engineer to comply with the desire of the client and architect for secrecy; and (2) whether it was ethical for the city engineer to maintain secrecy.[45] The board concluded that, under the NSPE Code of Ethics, "the engineer is released from the obligation to maintain confidentiality."[46] It noted that while the engineer's obligation to refrain from revealing confidential information, data, and facts concerning the business affairs of the client without the consent of the client is a significant ethical

obligation, the code refers to the primary obligation of the engineer to protect the safety, health, property, and welfare of the public.[47] Based on this backdrop, the board unequivocally ruled that "matters of public health and safety must take precedence."[48] It ultimately concluded that it was not ethical for the structural engineer to comply with the client's and the architect's desire for secrecy or for the city engineer to maintain secrecy.[49]

As the Citigroup case demonstrates, there is an uneasy tension between competing ethical obligations to which a design professional is subject. That case also illustrates the gray areas between the design professional's ethical obligations. In the end, however, the protection of the health, safety, and welfare of the public should take precedence.

The Duty to Warn or Disclose

A design professional who discovers a potentially calamitous error that creates a dangerous situation also may have a legal duty to warn certain people of the danger. Justice Cardozo famously described the circumstances in which a legal duty arises: "The risk reasonably to be perceived defines the duty to be obeyed, and risk imports relation; it is risk to another or to others within the range of apprehension."[50] Therefore, a design professional who discovers dangerous conditions due to a design flaw should evaluate who is at risk of danger.

A design professional's duties may extend to several stakeholders, even without contractual privity, where safety is at risk. Such stakeholders may include contractors that rely on the design, the public, developers, and people who have legal interest in property.[51] Furthermore, depending on the jurisdiction, a court may weigh several factors to determine whether the design professional owes a duty of care to a party without contractual privity.[52]

Duty to Warn Based on Scope of Work

The scope of the design professional's contractual commitment also shapes the design professional's duty to warn the public regarding safety concerns. For example, an architectural firm that contracted to review comprehensively a water garden's existing conditions and determine whether the water garden complied with the ADA owed no duty to the public because the contract did not require the firm to report any hazards detected.[53] In that case, a city contracted with an architectural firm to review a water garden's existing conditions and determine whether the water garden complied with the ADA.[54] The architects visually inspected the water garden and submitted a conditions survey to the city, but the city did not retain the firm to design or implement any changes.[55] Subsequently, four people improperly entered the water garden and died.[56] The Texas Court of Appeals held that the architects owed no duty to the public because the architects' "duty depends on the contract they entered into with the City, and . . . there is no evidence that the contract required [the architects] to report or make safe any hazards detected."[57]

The scope of work can also be important to determine whether a design professional has a duty of care to construction workers on the project where safety issues arise. Standards applied by courts in different jurisdictions vary, but the level of supervision that the design professional has over the construction seems to be an important factor. For example, the New Jersey Supreme Court determined that an engineer who was contractually responsible to observe the progress of the construction had a duty of care to construction workers even though "[t]he engineer did not have any contractual obligation to supervise the safety procedures of the construction."[58] In contrast, Delaware courts focus on whether the design professional has active control over the construction work.[59]

There is little doubt that the primary ethical obligation of design professionals in providing professional services is to protect the health, safety, and welfare of the public.

Despite the significance of the scope of work, a design professional's duty of care when a safety risk arises may exceed the duties arising out of the contractual scope of work if the design professional assumes a duty of care by its affirmative conduct. The Supreme Court of Alaska, for example, has held that the state retained sufficient control of a project as to assume a duty of care to construction workers where a state engineer once stopped work on a project.[60] In that case, a state geologist reported to a state project engineer that the slope of excavation was too steep, and the engineer stopped the work on the project.[61] Subsequently, after work resumed, loose, hanging rock fell from the slope and killed two construction workers.[62] The Supreme Court of Alaska held that a reasonable juror could find that "the state retained sufficient control over the construction operation to impose a duty of care . . . by assuming affirmative duties with respect to safety."[63] Therefore, while the scope of work is normally critical to determine the duty of care, a design professional's affirmative conduct may trump the scope of work to define the professional's duty of care.

Client Confidentiality and the Duty to Warn

One potential thorn arises in a design professional's determination of whether to notify the public of a potential catastrophic error that impacts safety where an engineer maintains a confidential professional relationship with the owner.[64] The NSPE Board of Ethical Review has addressed the conflict between a design professional's duty to protect public health and safety with the obligation to maintain the confidentiality of client information. In Case No. 13-11, a

fire protection engineer was retained by his client to provide a confidential report in connection with the possible renovation of an apartment building the client owned.[65] An audibility test of the fire alarm inside of occupied residential units showed the alarm could not be heard within all the residential units, which was a violation of the local fire code. The engineer informed of the client of the audibility test results and code violation. Later, the client informed the engineer that the financing for the project had fallen through and the renovations would be delayed. As a result, the problems with the fire alarm system would not be immediately addressed but would have to wait until a later time when financing was available.

The board was asked to decide what the engineer's obligations were under the circumstances. In reaching its decision, the board iterated that matters of public health and safety are primary and must take precedence over the obligation of an engineer to refrain from revealing confidential information, data, and facts concerning the business affairs of the client without consent of the client. The board noted that the engineer's ethical obligations hinged on his professional judgment regarding the level of risk posed by the fire code violation. The board believed the fire alarm defect rose to the level of an imminent and ongoing public safety risk and required the engineer to immediately advise the client that appropriate steps must be taken to protect the occupants of the building from those risks. If the client did not address the issues immediately, then the engineer would be obligated to report the code violation to enforcement officials.

Similarly, the advice of California's attorney general is likely illustrative of what would be expected of a design professional when confronted with choosing between risk of serious injury to a third party and client confidentiality[66]: if an owner retains an engineer to investigate a building's integrity and the engineer "determines . . . that there is an imminent risk of serious injury to the occupants" but the owner requests that the engineer treat the results of the investigation as confidential, the engineer has a duty to warn the building's occupants.[67]

Confidentiality of Peer Review or Third-Party Consultants

As part of its investigation of a potential design error, the design professional may seek peer review to confirm the actual existence of the error and the nature and severity of the error. In doing so, the design professional should exercise caution. If the reviewing design professional determines the design error poses a threat to human health and safety, that person may have an ethical duty to warn that extends beyond the client.

In Case No. 90-5, the NSPE Board of Ethical Review addressed the issue of whether an engineer retained by an attorney for a building owner involved in litigation had an ethical obligation to disclose serious structural defects in the building that he discovered during his inspection that he believed posed an immediate threat to the safety of the building tenants, despite being told by the attorney that he must maintain the information as confidential.[68] The board ruled that the engineer, having become aware of the imminent danger to the structure, "had an obligation to make absolutely certain that the tenants and public authorities were made immediately aware of the dangers that existed."[69] In reaching its decision, the board recognized that while engineers have an important ethical obligation to not reveal facts obtained in a professional capacity without the client's consent, the code provides a clear exception in cases where the disclosure of such information is authorized by the code or required by law. The board ultimately ruled that in cases where the public health and safety is endangered, engineers not only had the right but also the ethical responsibility to reveal such facts to the proper persons.

Duty to Warn Where Design Error Creates No Risk to Public Safety

A question arises as to the extent of a design professional's duty to warn where a design error or omission is discovered that poses no risk to public health and safety. For example, must a design professional make a disclosure where a design is not code-compliant, or a performance test is not the test specified under the contract, though he or she is satisfied that no harm to the public will ensue? Where a design professional takes issue with a proposed deviation or nonconformance sought by the owner, the designer should make this objection clear. It has been suggested that continuing work under a well-documented written protest may reduce liability and be a less risky approach than terminating the work or contract entirely.[70] This should not, of course, take away from the duty to warn where any danger arises to public health and safety.

The NSPE Board of Ethical Review considered an engineer's duty to report government contract variations in Case No. 09-4.[71] Here, an engineer worked as an executive with SuperCom, a company producing electronic equipment for the military. The engineer was soon informed by a manager in a separate division that under an existing contract with the Department of Defense, a key test on a product was not being performed as specified in the contract. After investigation, the engineer found that a shorter and significantly less costly test had been substituted, though the new test was as effective. The engineer recommended to upper management that it apply for a contract change authorizing the simpler test. Upper management rejected this suggestion, and the engineer took no further action.

The question for the board was whether it was ethical for the engineer not to pursue the matter further. The board considered that SuperCom may be engaging in government contract fraud by knowingly employing an unauthorized substitution, in violation of the contract, resulting in a financial windfall. This conduct exposed SuperCom and its employees, including the engineer who reported the issue to upper management, to civil and possibly criminal prosecution.[72] The board concluded that the engineer had an ethical obligation to advise SuperCom's higher level executive team that they were compelled to contact the appropriate federal

contracting officials and seek a contract change.[73] When SuperCom decided to take no further action, the engineer, according to the view of the NSPE board, should have reported the conduct to the appropriate governmental authorities. The board reached this conclusion even though the substitution of the test did not pose any danger to public health and safety, and notwithstanding that the engineer was neither involved in the decision nor directly responsible for overseeing the assignment for SuperCom.

Reconciling Legal Standards with Ethical Obligations

In *LeBlanc v. Logan Hilton Joint Venture*, an architectural firm provided services pursuant to a contract that included construction administration services during the construction of a hotel under which it was obliged to report to the hotel any deficiencies in work and/or deviations from the contract.[74] The firm hired an electrical engineering services consultant, who informed the electrical subcontractor by letter that it needed to place warning signs and diagrams on parts of the electrical switchgear. The consultant directed the subcontractor to submit a shop drawing detailing the wording and placement of signs.[75] The electrical subcontractor took no action. The project was completed and certified by the architect without the warning signs having been installed, and an electrician was subsequently electrocuted. The Massachusetts Supreme Judicial Court observed there was sufficient evidence that the design team committed a breach of its contractual obligations by failing to report to the hotel that the electrical subcontractor had failed to comply with the direction.[76] The court noted that the design team had actual knowledge of the deficiencies but wrongfully failed to report the deficiencies even though they presented an obvious risk to the safety of any person who would operate the switchgear.[77]

In *Burg v. Shannon & Wilson, Inc.*, an engineering firm was hired by a city to investigate cliffs above certain residences, so that the firm could submit recommendations for improving the land's stability in an area prone to significant landslides.[78] The firm recommended that various remedial measures be taken prior to the next rainy season. Between its initial recommendations and the final report, the same engineering firm was retained to provide a report relating to one of the affected resident's property for the purposes of seeking an equity loan on the property.[79] Some months later, a severe storm damaged various residents' properties. The homeowners brought an action against the engineering firm for failure to warn of the recommendations that had been made to the city. The homeowners contended that a legal duty was embodied by the relevant professional engineering standards (created by the legislature) that mandated that registrants "be duly certified 'in order to safeguard life, health, and property, and to promote the *public welfare*.'"[80] The Washington Court of Appeals observed that Washington case law had not addressed whether these statutes and regulations establish a cognizable duty in a negligence action against professional engineers.[81] It noted that professional engineers owe duties to the public, to their clients, and to their employers, but "the broad pronouncements that engineers owe a general duty to the public welfare alone, do not establish that engineers owe a duty to any identifiable group or individual."[82] The court held that the homeowners had not demonstrated that the engineers owed a duty to them individually.[83] Further, the court reasoned that even though one of the homeowners was a client of the firm, the contract contained neither a gratuitous promise to apprise the homeowner of the recommendations made to the city nor a requirement for future reports.[84]

Nature and Extent of Disclosures

Once it is clear that there is a duty to disclose, a question may arise as to the content and extent of that duty. The design professional must decide whom to inform, the timing of any disclosures, and the nature and extent of the disclosures. A design professional may, in some circumstances, satisfy his or her duty to inform by the mere disclosure of the relevant issue or error, without further corrective action, so long as no misrepresentation arises. In other cases, a design professional should furnish possible solutions for consideration by an owner.

In *Estate of Lyons v. CNA Insurance Cos.*, an action was brought against an engineering firm alleging the negligent design of a bridge.[85] The engineering firm's original design incorporated a long and low vertical curve requiring reconstruction of adjoining roadways, increasing the overall cost of the project.[86] The engineering firm reported these findings to the Department of Transportation (DOT), which requested the firm propose an alternative design.[87] The engineering firm proposed a bridge with a much higher vertical curve, exceeding design standards.[88] The firm repeatedly advised that the 70-foot design curve was an exception to the current design standards.[89] The DOT directed the engineering firm to proceed with the higher vertical curve.[90]

The Wisconsin Court of Appeals held that the engineering firm fulfilled its duty to inform the DOT about design concerns by stating that the design was "an exception to the current standards."[91] The court observed that the legal standard appropriate to this case required that a professional engineer warn the supervising state officials about any possible dangers that are otherwise unknown to the state.[92] Such a standard makes sense. It removes the danger that a design professional will suppress information discovered late in the project, the disclosure of which would be in the public interest. Further, it ensures that high-level decisions as to whether to proceed, redesign, or seek an exception are made with all of the pertinent information set forth for consideration by the owner.

Ethical Considerations for Lawyers—When May I Disclose?

Lawyers may be placed in a unique situation where a client seeks legal advice on the obligation to disclose a

significant design error, or where a problematic issue is revealed by an expert retained during the course of the lawyer's representation. Lawyers should provide a client with the most complete advice possible as to the likely consequences of disclosure or nondisclosure. However, lawyers may find themselves feeling conflicted where a client decides to withhold information that could have a bearing on public health and safety. The question that then arises is whether there are circumstances that require or permit a lawyer to make disclosures of that confidential information to third parties, even where the client has objected to such disclosure.

Rule 1.6(a) of the ABA Model Rules (Confidentiality of Information) prevents lawyers from revealing information relating to the representation of their clients, unless informed consent is given by the client.[93] Model Rule 1.6(b)(1), however, provides an exception to this rule, in circumstances where the lawyer reasonably believes disclosure is necessary "*to prevent reasonably certain death or substantial bodily harm.*"[94] Comment 6 to Model Rule 1.6 states that paragraph (b)(1) recognizes the overriding value of life, and that such harm is reasonably certain to occur if "it will be suffered imminently or if there is a present and substantial threat that a person will suffer such harm at a later date if the lawyer fails to take action necessary to eliminate the threat."[95]

Once it is clear that there is a duty to disclose, a question may arise as to the content and extent of that duty. The design professional must decide whom to inform, the timing of any disclosures, and the nature and extent of the disclosures.

An example of acceptable disclosure provided by the Model Rules is where a lawyer knows that a client has accidently discharged toxic waste into a town's water supply, creating a present and substantial risk that a person who drinks the water will contract a life-threatening or debilitating disease.[96] In such a case, the lawyer's disclosure is said to be necessary to eliminate the threat, or reduce the number of victims. New York, which has adopted ABA Model Rule 1.6(b)(1), additionally notes that "a remote possibility or small statistical likelihood that any particular unit of a mass-distributed product will cause death or substantial bodily harm to unspecified persons over a period of years" would not satisfy the exception.[97]

The disclosure is to be made to "the authorities."[98] The Model Rules do not set out who that relevant authority might be. A good starting point would likely be the relevant professional authority and the relevant public authority. For example, a report could be submitted to the applicable state engineering licensing board, or the NSPE Board of Ethical Review. In addition, a report to the relevant public authority might be, for example, the Environmental Protection Agency or the applicable state department of buildings.

Of course, a gray area exists when considering whether the harm is "reasonably certain" to occur or a "remote possibility." Attorneys may find themselves in a difficult position when faced with a tension between warning third parties of potential risks and upholding their duty of loyalty to the client, who may have instructed an attorney to remain silent on the issue. This was the conflict faced by California lawyers in Ethics Opinion 1981-58.[99] In that case, the Committee on Professional Responsibility and Conduct found that the lawyers were not permitted to disclose to third parties the content of a report from an engineer retained by the lawyers stating that a structure on the property owned by the client did not comply with the Uniform Building Code, and may not survive an earthquake. The committee did not consider that the lawyers were "satisfied beyond a substantial doubt" that there was an immediate, substantial risk to the public unless the disclosure was made.[100]

In the committee's view, the lawyers' ethical responsibility was to give the client the most complete advice possible to allow the client to make an informed choice between disclosure and nondisclosure. It was observed that the lawyers' primary responsibility was to maintain their own loyalty to the client and protect the client's secret, even where that protection might result in the lawyers' liability to third parties.[101] Further, should a lawyer decide that his or her loyalty to the client has been so diluted by the decision to withhold disclosure, the lawyer may consider whether to withdraw from the representation. Nevertheless, the lawyer must keep the report confidential, even after the lawyer has withdrawn.[102]

California has since updated its ethics rules to allow, but not require, a lawyer to reveal confidential information to the extent that the lawyer "*reasonably believes the disclosure is necessary to prevent a criminal act that the lawyer reasonably believes is likely to result in death of, or substantial bodily harm to, an individual.*"[103] Despite this updated rule, it is doubtful whether a different outcome would have been reached in the above case. The lawyers' decision to reveal the report would only be mandated under the confidentiality exception, where the client's failure to reveal the engineer's findings, or failure to remedy the situation, constituted a criminal act, as contemplated by the section. Further, this rule would only apply in circumstances where the criminal act has not yet taken place, as the disclosure must be necessary for prevention of the crime.

Even in those jurisdictions that adopt ABA Model Rule 1.6, lawyers face a significant challenge before disclosing confidential information. They must conclude

that there is a reasonable certainty of death or substantial bodily harm. Even if the lawyers in the California case were governed by ABA Model Rule 1.6, it is still unclear whether the engineer's report creates reasonable certainty of death or substantial bodily harm, sufficient to render any disclosure by the lawyers permissible, or whether a successful argument could be made that there is a present and substantial threat that a person will suffer such harm at a later date. Further, the situation may be complicated where doubt is cast on the accuracy of the relevant report, the expertise of the report's author, or where two or more conflicting reports of professionals exist. If a design professional were faced with such a situation, an obligation to investigate further and make disclosures may necessarily arise. However, there is no suggestion that a lawyer in the same position would be compelled to disclose or undertake peer review or otherwise seek verification of the allegations. Where two conflicting reports arise, this could arguably weaken the lawyer's conviction of "reasonably certain death or substantial bodily harm."

Insurance Considerations

Design professionals should be cognizant of whether any action brought against them for an alleged failure to warn will be covered or excluded under their relevant insurance policy. Whether an alleged failure to warn will fall within a coverage or exclusion may involve consideration of whether a duty to disclose arises from the carrying out of professional services or from some other duty unrelated to the party's expertise. This may ultimately determine whether an insurer's duty to defend will be triggered.

In *S.T. Hudson Engineers, Inc. v. Pennsylvania National Mutual Casualty Co.*, an engineering firm, S.T. Hudson Engineers, designed methods to stabilize a pier on two occasions.[104] Subsequently, an employee from the engineering firm and an employee from the construction company that installed the repairs observed that the repairs "were twisted, with flanges that were no longer parallel to each other."[105] The engineering firm directed an employee from the construction company "to inspect the pier further."[106] One year later, a company that owned a restaurant on the pier complained that the wood deck "was bouncy."[107] An employee from the construction company visited the pier and told the engineering firm that "the pier was going to collapse."[108] As predicted, it collapsed that night.

Hudson's comprehensive general liability (CGL) policy excluded coverage for personal injury or property damage arising out of the rendering or failure to render any professional services.[109] Hudson's insurer contended that the allegations brought against Hudson came within the mantle of professional services and were thus excluded. The New Jersey Superior Court disagreed. It observed that the exclusions speak in terms of professional services "actually performed or conducted." Here, the failure to provide warnings did not emanate from performance or failure to perform actual services, but rather from the failure to provide information.[110] Therefore, these were not excluded by the professional services exclusion in the CGL policy. Ultimately, the court found that Hudson had a duty to warn the owners of the danger, in addition to a duty to warn innocent third parties using the pier facilities. Nevertheless, the alleged negligent failure to provide such warnings represented a risk insured by the products-completed operations coverage, resulting in the insurer's duty to defend under the CGL policy.[111] Importantly, the court observed that the "allegations encompassing the violation of a duty to provide information about a known danger . . . are not dependent on the rendering of professional services."[112]

The underlying notion alluded to by the court in *S.T. Hudson Engineers*—that the duty to provide information about a known danger is not dependent on the rendering of professional services—is contentious. One could argue that any duty the engineer had to report on the imminent collapse of the pier would necessarily arise from the engineer's retention to investigate the pier, and would undoubtedly involve its technical knowledge, skills, and experience. The professional duties placed upon design professionals enumerated by professional codes underlie acts and omissions made in the course of providing services. To separate the duty to disclose from the carrying out of professional services is arguably an artificial distinction, particularly where the discovery is made following investigations rendered in the course of services, and not inadvertently. Notably, ethical codes do not qualify as legal standards that give rise to a legal duty of care.[113]

In *Landmark American Insurance Co. v. Soutex Surveyors, Inc.*, Soutex issued certificates of elevation for a number of homes, which later sustained flood-related damage in a hurricane.[114] Claims brought against Soutex alleged that it erroneously certified higher elevations than it should have, and upon learning of the errors prior to the hurricane, failed to disclose them to homeowners. Landmark, the insurance company which issued a professional errors and omissions policy to Soutex, alleged that the failure to disclose the errors did not constitute a failure to render a "professional service." Landmark argued that a subsequently discovered surveying error that could potentially harm another does not require special knowledge or training, but rather the law imposes a duty to disclose such information.[115] The court considered *S.T. Hudson Engineers*, which, while relevant, differed in that it construed a policy *exclusion*, something that had to be construed strictly under controlling New Jersey law. In Texas, however, ambiguous policy coverage clauses are construed liberally. The Texas district court considered the following with respect to a professional's duty to disclose:

First, one should ponder whether a *general* duty to disclose or correct erroneous information previously thought to be correct *necessarily* forecloses the notion

that there may be a concomitant *professional* duty. For example, might ethical codes impose a parallel professional duty? Might the law impose a redundant layer of duty on learned and skilled professionals that, *a fortiori*, constitutes a professional service? Are there instances when specialized knowledge, skill and training are so intertwined with discovering, disclosing or correcting an error that acting or failing to act comes within the ambit of rendering or failing to render a professional service?[116]

The court concluded that such a failure will fall within the rendering of a professional service when "discovery of such errors is premised on knowledge obtained from surveying experience, and when surveying expertise underlies the alleged liability for failure to warn."[117] In this case, the error was only discovered through tedious, technical, and skilled research, thereby triggering Landmark's duty to defend.

Conclusion

In closing, it must be acknowledged that design errors are an inevitable part of the design process. When confronted with the discovery of a potentially catastrophic design error, the design professional must carefully consider and balance many competing demands and obligations that, at times, may conflict with one another. In the end, the design professional must address design error issues in an ethically sound manner that places the health and safety of the public above all else.

Endnotes

1. Robert Lopez et al., *Design Error Classification, Causation, and Prevention in Construction Engineering*, 24 J. PERFORMANCE CONSTRUCTED FACILITIES 399 (2010).

2. *Id.*

3. Chism v. CNH Am. LLC, 638 F.3d 637, 643–44 (8th Cir. 2011); Sadler v. Int'l Paper Co., No. 09-1254, 2014 WL 1682014, at *6–7 (W.D. La. Apr. 28, 2014); Burg v. Shannon & Wilson, Inc., 43 P.3d 526, 530 (Wash. Ct. App. 2002).

4. ASCE CODE OF ETHICS Canon 1 (1914) (AM. SOC'Y OF CIVIL ENG'RS, amended 2017), http://www.asce.org/code-of-ethics.

5. *Id.* Canon 1(a).

6. *The Lessons of Katrina*, AM. SOC'Y CIV. ENGINEERS (July 1, 2015), http://www.asce.org/question-of-ethics-articles/july-2015.

7. *Silence Is Not So Golden*, AM. SOC'Y CIV. ENGINEERS (Nov. 1, 2014), http://www.asce.org/question-of-ethics-articles/nov-2014.

8. ASCE CODE OF ETHICS Canon 1(c).

9. *See Corporate Culture in Support of Engineering Ethics*, AM. SOC'Y CIV. ENGINEERS (Sept. 1, 2013), http://www.asce.org/question-of-ethics-articles/sept-2013.

10. *Member Suspects Treatment Plant Is Not in Compliance with Fire Code*, AM. SOC'Y CIV. ENGINEERS (Dec. 1, 2009), http://www.asce.org/question-of-ethics-articles/dec-2009.

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*

15. *Id.*

16. CODE OF ETHICS & PROF'L CONDUCT r. 2.105 (AM. INST. OF ARCHITECTS 2018), https://aianova.org/pdf/codeofethics.pdf.

17. Am. Inst. of Architects Nat'l Ethics Council, Decision 2006-21 (Oct. 5, 2009), http://content.aia.org/sites/default/files/2016-08/Code_Of_Ethics_Decision_2006_21.pdf ("Wanton Disregard of the Rights of Others; Failing to Resolve or Notify Others of Unsafe Condition Resulting from Client Decision; Making False Statement of Material Fact; Failing to Ensure Ethical Conduct of Employee").

18. *Id.* at 6.

19. *Id.*

20. *Id.*

21. *Id.* at 7–11.

22. *Id.* at 8.

23. *Id.* at 7–8.

24. *Id.* at 9–10.

25. *Id.* at 10.

26. *Id.* at 9.

27. NPSE CODE OF ETHICS FOR ENG'RS pmbl. (NAT'L SOC'Y OF PROF'L ENG'RS 2019), https://www.nspe.org/resources/ethics/code-ethics.

28. *Id.* Canon I.

29. *Id.* Canon II.

30. PROF'L & ETHICAL CONDUCT GUIDELINES § I (AM. COUNCIL OF ENG'G COS. 1980), http://www.acec.org/about/ethics.

31. *Id.* § II.

32. MICHAEL J. VARDARO, AIA TRUST, LEMESSURIER STANDS TALL: A CASE STUDY IN PROFESSIONAL ETHICS (2013), http://www.theaiatrust.com/whitepapers/ethics/LeMessurier-Stands-Tall_A-Case-Study-in-Professional-Ethics.pdf.

33. *Id.* at 2.

34. *Id.* at 2–3.

35. *Id.* at 3–4.

36. *Id.* at 6.

37. NSPE Bd. of Ethical Review, Case No. 98-9 (Jan. 22, 1989), https://www.nspe.org/sites/default/files/Ber98-9-app.pdf.

38. VARDARO, *supra* note 32, at 7.

39. *Id.* at 7–8.

40. *Id.* at 8–9.

41. *Id.* at 9.

42. *Id.* at 9–10.

43. *Id.* at 15.

44. *Id.* at 14–15.

45. NSPE Bd. of Ethical Review, Case No. 98-9, at 1 (Jan. 22, 1989), https://www.nspe.org/sites/default/files/Ber98-9-app.pdf.

46. *Id.* at 4.

47. *Id.*

48. *Id.*

49. *Id.* at 5.

50. Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 99–100 (1928).

51. Pointe at Westport Harbor Homeowners' Ass'n v. Eng'rs Nw., Inc., 376 P.3d 1158, 1163 (Wash. Ct. App. 2016); E. Steel Constructors, Inc. v. City of Salem, 549 S.E.2d 266, 275 (W. Va. 2001).

52. Weseloh Family Ltd. P'ship v. K.L. Wessel Constr. Co., 22 Cal. Rptr. 3d 660, 666–67 (Cal. Ct. App. 2004) (quoting Bily

v. Arthur Young & Co., 3 Cal. 4th 370, 397–98 (1992)).

53. Dukes v. Philip Johnson/Alan Ritchie Architects, P.C., 252 S.W.3d 586, 595 (Tex. App. 2008).

54. *Id.* at 593.

55. *Id.*

56. *Id.* at 590.

57. *Id.* at 595.

58. Carvalho v. Toll Bros. & Developers, 143 N.J. 565, 569, 572–77 (1996).

59. Seeney v. Dover Country Club Apartments, Inc., 318 A.2d 619, 623–24 (Del. Super. Ct. 1974).

60. Moloso v. State, 644 P.2d 205, 212–14 (Alaska 1982).

61. *Id.* at 213.

62. *Id.* at 213–14.

63. *Id.* at 214.

64. Bd. of Educ. of Hudson City Sch. Dist. v. Thompson Constr. Corp., 111 A.D.2d 497, 498–99 (N.Y. App. Div. 1985).

65. NSPE Bd. of Ethical Review, Case No. 13-11 (Apr. 30, 2014), https://www.nspe.org/sites/default/files/BER%20Case%20No%2013-11-FINAL.pdf.

66. Kenneth R. Michael, *Design Professional Liability: A Balanced Framework for Third-Party Actions by Tenants and Users*, 8 CONSTR. LAW., Aug. 1994, at 8.

67. 85 Ops. Cal. Att'y Gen. 208 (1985).

68. NSPE Bd. of Ethical Review, Case No. 90-5 (Nov. 9, 1990), https://www.nspe.org/sites/default/files/Ber90-5.pdf.

69. *Id.* at 3.

70. KEVIN R. SIDO ET AL., ARCHITECT AND ENGINEER LIABILITY: CLAIMS AGAINST DESIGN PROFESSIONALS § 20.09 (4th ed. 2017-1 Supp.).

71. NSPE Bd. of Ethical Review, Case No. 09-4 (Feb. 18, 2010), https://www.nspe.org/sites/default/files/resources/pdfs/Ethics/EthicsResources/EthicsCaseSearch/2009/BER%20Case%2009-4-APPROVED.pdf.

72. *Id.* at 4.

73. *Id.* at 5.

74. 463 Mass. 316, 318 (2012).

75. *Id.* at 322.

76. *Id.* at 328.

77. *Id.* at 331.

78. 43 P.3d 526, 528 (Wash. Ct. App. 2002).

79. *Id.*

80. *Id.* at 530 (citing WASH. REV. CODE § 18.43.010).

81. *Id.* at 531.

82. *Id.*

83. *Id.* at 531–32.

84. *Id.* at 532–33.

85. 207 Wis. 2d 446 (Ct. App. 1996).

86. *Id.* at 451.

87. *Id.* at 458.

88. *Id.* at 451.

89. *Id.* at 460.

90. *Id.* at 459.

91. *Id.* at 460.

92. *Id.*

93. MODEL RULES OF PROF'L CONDUCT r. 1.6(a) (AM. BAR ASS'N 2016).

94. *Id.* r. 1.6(b)(1) (emphasis added).

95. *Id.* r. 1.6 cmt. 6.

96. *Id.*

97. N.Y. RULES OF PROF'L CONDUCT r. 1.6 cmt. 6B (2009) (N.Y. STATE BAR ASS'N, amended 2018).

98. *See* MODEL RULES OF PROF'L CONDUCT r. 1.6 cmts. 6–7. With respect to a disclosure to prevent a client from committing a crime under Model Rule 1.6(b), the lawyer may reveal information to the extent necessary to "enable affected persons or appropriate authorities" to prevent the crime or fraud.

99. State Bar of Cal., Standing Comm. on Prof'l Responsibility & Conduct, Formal Op. 1981-58 (1981), https://www.calbar.ca.gov/Portals/0/documents/ethics/Opinions/1981-58.htm.

100. *Id.* at 1.

101. *Id.* at 2.

102. *Id.*

103. CAL. RULES OF PROF'L CONDUCT r. 1.6 (STATE BAR OF CAL., revised 2018) (emphasis added).

104. 909 A.2d 1156, 1161 (N.J. Super. Ct. App. Div. 2006).

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.* at 1162.

109. *Id.* at 1163. However, the CGL policy did provide for "products-completed operations" coverage, which included coverage for the providing of or failure to provide warnings or instructions. Also, note that Hudson was covered by a professional liability policy, but the policy's coverage "does not apply to CLAIMS arising out of or caused by . . . completed operations which hazards are to be insured by YOU under a . . . (CGL) policy." *Id.*

110. *Id.* at 1164.

111. *Id.* at 1165.

112. *Id.* at 1166.

113. Chism v. CNH Am. LLC, 638 F.3d 637, 643–44 (8th Cir. 2011); Sadler v. Int'l Paper Co., No. 09-1254, 2014 WL 1682014, at *6–7 (W.D. La. Apr. 28, 2014); Burg v. Shannon & Wilson, Inc., 43 P.3d 526, 530 (Wash. Ct. App. 2002).

114. No. 1:09-CV-696, 2010 WL 5692073 (E.D. Tex. Dec. 22, 2010).

115. *Id.* at *7.

116. *Id.*

117. *Id.* at *9.