

# CHAPTER I

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## Qualifying the Construction Expert Witness

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### I. Introduction

#### *ATTORNEY'S PERSPECTIVE*

A plaintiff is generally required to establish "liability" (the breach of a legal duty or obligation) and "damages" (the compensation or other relief awarded due to the breach of such legal duty or obligation). The "trier-of-fact" (i.e., the judge, jury, or arbitration panel) is then responsible for determining whether the plaintiff has established entitlement with a requisite degree of certainty (i.e., a "preponderance of the evidence") and, if so, what type and amount of damages to award. If it would assist the trier-of-fact in making such a determination, and if making such a determination requires scientific, technical, or other specialized knowledge beyond that ordinarily possessed by the average lay person, then expert witness testimony is almost always required. Conversely, the defendant will almost always utilize expert testimony in an effort to dissuade the trier-of-fact from making a determination on liability and/or damages in favor of the plaintiff.

Attorneys generally want to engage the expert for his client's case who is the most credible, experienced, and qualified in a particular field of expertise. However, an evaluation of which expert to engage for a given case also depends on several other factors, including (1) the anticipated fees and costs of such individual, which must be evaluated in light of the amount of damages being sought by or against the client; (2) the availability of the individual to personally prepare the required report and testimony in a timely and high-quality manner without delegating too much of the preparation to subordinates; and (3) whether the individual has been previously engaged as an expert, prepared

expert reports, testified at trial or at deposition, and been qualified as an expert before a judge or arbitrator, as appropriate, in the same area of expertise as the testimony to be offered.<sup>1</sup> The use of the word “individual” among these factors is important and intentional—attorneys do not hire “expert firms” to prepare reports; the expert firm cannot be qualified as an expert; and the expert firm does not testify at deposition or at trial. Although expert firms frequently bring to bear tremendous resources in a variety of specialty areas, the expert is the one who must possess the necessary qualifications and experience to testify. Thus, the individual, and not the expert firm, is the most critical factor in the selection of an expert.

Individuals that are successful in generating and maintaining expert engagements offer the following valuable services to attorneys and their clients: (1) discern and evaluate issues within their scope of expertise and retention; (2) evaluate possible solutions and recommend appropriate courses of action; (3) identify problem areas that necessitate additional evaluation; (4) deliver work-products, such as expert reports, on time or ahead of time so that last-minute revisions and rework can be avoided; (5) prepare for and provide persuasive testimony to support the positions stated in expert reports; (6) provide an estimate of the fees and costs of the services to be provided, and render those services in reasonable proximity to such estimate; (7) communicate with the attorneys frequently and respond to e-mails and calls in a timely manner; and (8) take direction from the attorneys in terms of focusing on particular issues, collaborating with other experts, and preparing for depositions, hearings, and/or trials. Whereas the end goal of the attorney is to provide the best possible service for the client, the value of an expert is most readily determined by how much he helps an attorney achieve that goal while remaining fair, independent, and free of blatant bias.

#### **EXPERT'S PERSPECTIVE**

Becoming a useful and well-respected expert in a construction case is not a simple matter of having been involved in the construction industry for a certain number of years or being able to offer general opinions regarding construction industry standards and best practices. To truly assist an attorney and the trier-of-fact, and to build a reputation as a reliable expert, requires the ability to develop well-reasoned opinions using a basis-in-fact analysis and generally accepted principles of investigation, correlation, assimilation, and

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1. While some cases necessitate an expert who has experience being deposed or testifying at trial, those who have made a career out of serving as an expert witness are sometimes viewed unfavorably by the trier-of-fact. Thus, depending on the issues in the case and the damages at stake, the client's interests are sometimes better served by engaging an expert who has rarely, or perhaps never, been retained as an expert witness before, but whose availability is higher and whose hourly rate is lower. Engaging relatively inexperienced experts also allows people who want to become expert witnesses an opportunity to develop the necessary skills and experience to do so.

analysis, and it requires application of those principles in a consistent, and whenever applicable, scientific fashion. It also requires the ability to recite the facts of a project, in many cases without having been on the project during the evolution of the design or construction effort. Perhaps most importantly, these opinions and facts must be articulated in a clear and convincing manner while maintaining one's credibility with the trier-of-fact.

In short, to become an expert witness routinely utilized in construction cases, potential experts must work toward enhancing their credentials and expertise through a variety of experiences, education, training, and professional skill development, in addition to building professional relationships, networking, authoring publications, teaching seminars, and working side by side with, and being mentored by, other qualified experts and attorneys.

## II. Types of Forensic Construction Experts

### ATTORNEY'S PERSPECTIVE

Construction cases are considered particularly complex and challenging. A wide variety of potential issues could be raised in any given construction case that require expert opinions from a variety of different disciplines, including contractors, architects, engineers, accountants, claims consultants, and schedulers. Experts can testify only in the area of expertise in which they have been tendered and accepted by the court or arbitration panel and only to the extent their opinions have been previously disclosed in accordance with the applicable rules of procedure. The attorney is responsible for identifying the kind of expert testimony that is necessary to support each substantive issue raised in a case. The attorney must keep in mind that, frequently, more than one expert will be needed to sufficiently address a single substantive issue in the case. The following experts are most routinely utilized in construction cases.

#### A. Standard of Care Experts

Experts routinely offer opinions on whether the conduct, actions, or omissions of a construction professional (e.g., architect, engineer, or contractor) fall beneath a level of practice consistent with the professional skill and care ordinarily provided by others practicing at the same time, in the same or similar locality, and under the same or similar circumstances. Defining the standard of care for a particular construction professional is generally beyond the knowledge ordinarily possessed by the average lay person; and generally requires testimony from someone with the relevant knowledge, skill, experience, training, or education in the particular area of expertise. Therefore, experts often are necessary in a construction case to assist the trier-of-fact in both defining the standard of care and determining whether it has been satisfied. Where a defendant is found by the trier-of-fact to have acted below or inconsistent with

the standard of care, this will usually lead to a determination of liability (such as for breach of contract or negligence actions).

### **B. Damages Experts**

The damages claimed in construction disputes represent another area of specialized knowledge, skill, experience, training, or education that is beyond the knowledge possessed by most lay people. Thus, damages experts frequently are needed in construction cases to assist the trier-of-fact with calculating and measuring the costs associated with liability (which is generally articulated by other experts). The damages expert usually is concerned with the following costs typically incurred on a construction project: changes in design or scope, costs of repair or replacement, diminution in value, liquidated damages, delays, disruptions, loss of productivity, extended management or supervision costs, home office overhead, and lost profits. Damages experts will generally compile cost data, compare such data to bid estimates or contract rates, provide estimates of costs where necessary, and prepare forensic cost or accounting reports.

Most state and federal courts and arbitration panels require that the damages expert's opinions be offered with a reasonable degree of certainty. Where a damages expert has relied on cost estimating for some or all of the opinions, the damages expert must be prepared to convince the trier-of-fact that the estimate is accurate and is supported by verifiable data, and that the method of estimation applied is reasonable.<sup>2</sup>

### **C. Delay and Disruption Experts**

Delay and disruption experts analyze the cause(s) for time impacts on a construction project using various accepted methods, including the *critical path* analysis or *window(s)* analysis. Delay and disruption experts generally calculate the number of days that the project was delayed; attribute fault for such delays, or a portion thereof, to a particular party or parties; and opine as to whether such delays are excusable/non-excusable or compensable/non-compensable, depending upon the nature of the claims. The trier-of-fact is then responsible for (1) determining liability based on the (often conflicting) testimony of the delay and disruption experts and (2) assessing damages based on either the testimony of the damages expert or the terms of the applicable contracts (e.g., the liquidated damages clause).

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2. For a discussion of the "reasonable certainty" requirement in calculating lost profits, the lessons of which apply equally to other areas of cost estimation, see Robert M. Lloyd, *The Reasonable Certainty Requirement in Lost Profits Litigation: What It Really Means*, 12 TRANSACTIONS: THE TENN. J. BUS. L. 11 (2010).

### D. Combination Experts

Some experts have acquired sufficient experience such that they are able to testify as an expert in more than one area of expertise. For example, an engineer who has the necessary experience to evaluate whether a roofing system was properly designed (i.e., liability) may also have the knowledge, experience, and training to determine what the costs associated with repairing such a roofing system would be (i.e., damages). However, in order to provide testimony in both areas of expertise (liability and damages), the combination expert often needs to be separately tendered to and accepted as an expert in both areas, with an appropriate expert report duly disclosing the opinions and the qualifications in both areas. Although attorneys may be tempted by the potential cost savings to be achieved by designating a combination expert, attorneys must also be careful to ensure that the combination expert is sufficiently qualified to offer expert testimony in more than one area. If the so-called combination expert is not accepted in a certain area, and the attorney does not have a backup expert in place to provide the expected testimony, it could be catastrophic.

#### **EXPERT'S PERSPECTIVE**

Because it is difficult, if not impossible, to possess an intricate knowledge of all facets of construction, a forensic construction expert witness needs to be considered an expert in narrower fields of expertise. These narrower fields or categories, generally understood and considered to be those in which forensic construction expert witnesses practice their profession, include:

- Technical (identifies design, construction, or construction process problems and causes of a technical nature)
- Liability (identifies causation of issues and problems, and parties who are responsible)
- Delay and Disruption (identifies causation and parties related to lost time and the effects or consequences)
- Damages (develops calculations or measurement of allocable costs consistent with an acceptable methodology, based on own findings of responsibility, or those of other liability experts)
- Standard of Care (identifies performance deficiencies of parties)
- Combination (qualified to testify in more than one of the above fields of expertise, including liability and damages categories without need to rely on findings and opinions of other experts)

The technical expert is thought to be an experienced engineer, architect, or scientist. However, the expertise of a skilled and experienced contractor, or operator, should not be discounted if appropriate for the given case at hand. For example, an experienced engineer may be needed as a technical expert to address proper design of an HVAC system, whereas an experienced contractor may be appropriate as a technical expert to evaluate if the HVAC system was

installed per the drawings and specifications. An experienced plant operator may be appropriate as a technical expert to determine if the HVAC system was properly operated and maintained.

On the other hand, the technical expert may not be the same expert as one who determines liability. In fact, the court may specifically exclude an expert from providing an opinion on liability and may reserve that function for the trier-of-fact alone. In other cases, the liability expert may be a person who is specifically licensed to perform a function related to liability, such as an independent insurance adjuster whose purpose is to determine liability with respect to a specific insurance policy in effect at the time of a loss.

The delay and disruption expert is probably the most widely understood and utilized type of expert in construction. When construction projects fall behind schedule, a schedule analysis can be conducted by a delay expert to determine the impact to the critical path of the project and the driver activities causing the impact. The disruption expert, many times the same person, can quantify disruption to a project using established techniques like a *measured mile* analysis. It has often been said that delay is not disruption and disruption is not delay, but they go hand in hand and often are difficult to separate. Delay is evidenced by the later start or later completion of a construction activity with the affected activity's duration remaining approximately the same, whereas disruption is evidenced by an unanticipated change in the conditions or sequence under which a construction activity or series of activities had to be performed. Thus, the need for an experienced, skilled delay and disruption expert who can discern the difference, and who can explain why the disrupted work was unable to be completed in the manner anticipated or at the production speed planned by a contractor at the time of submitting its bid.

The damages expert is also widely understood and utilized in construction. Not to be confused with a technical expert who may opine as to the physical damage sustained due to a property casualty loss or defect, the damages expert is solely concerned with the cost impact that results from delay, disruption, loss of productivity, escalation, and other related impacts to the cost of a project. There are many ways for a damages expert to compile data, prepare forensic cost estimates, make comparisons with bid estimates, and perform calculations of costs based on various productivity assumptions or crew and equipment configurations, and so on. There are numerous publications on the topic of proving construction damages, and it is not the purpose of this book to recite or repeat the numerous methodologies utilized by damages experts.

Standard of care experts are often crucial to the outcome of a case. In construction, standard of care experts are called upon to express opinions on the conduct, actions, and inactions of owners, architects, engineers, construction managers, and/or contractors that deviate from the norm in the delivery of their respective responsibilities under their contracts or terms of engagement. In many cases, these responsibilities are not defined in written agreements. Standard of care experts are relied on to define what constitutes a violation of

the inherent responsibilities or obligations of a party, and when any misconduct reaches the level of a violation of the applicable standard of care. Standard of care experts are generally familiar with the practices and procedures that are consistent with local norms of behavior and conduct, and they are called on to identify and explain the nature and degree of deviation from an applicable standard. This requires a high level of knowledge, education, skill, experience, and training in a wide range of construction industry practices.

Finally, there are a small number of forensic construction experts who have acquired such a vast amount of experience in a variety of technical fields; in the areas of contract use from a construction professional's perspective; in the areas of construction scheduling, cost estimating, and cost accounting; and familiarity with the industry standards that apply to the proper conduct of the parties involved in construction that they become recognized and qualified to testify as forensic expert witnesses in multiple categories and fields of expertise. Therefore, they may be qualified as the only expert needed on a construction claim. For example, it is possible to find and engage one person who is qualified to be a combination expert who performs the entitlement, delay, disruption, and damages analyses into one report or to testify on all related issues.

### III. Obligation of the Expert and Defining the Scope of the Expert's Retention

#### ATTORNEY'S PERSPECTIVE

The most important document in the relationship between an attorney and an expert witness is the engagement letter. The engagement letter specifically establishes the expert's scope of retention, provides whether the expert is going to serve as a testifying or non-testifying expert, sets forth the work-product to be provided by the expert, and states the basis on which the expert will be compensated. Engagement letters may also contain a multitude of other terms and conditions specific to the needs of each case or at the request of the attorney or expert. Experts who are unfamiliar with engagement letters should take caution to carefully read the terms of any engagement letter that sets forth the expectations of the engaging attorney.

It is best practice for both attorneys and experts to develop a standard engagement letter that includes the terms and conditions they prefer to use as a starting point for drafting and negotiating an engagement letter for a specific case. Engagement letters are commonly drafted to allow attorneys to terminate the expert at-will and further provide that after such termination the expert cannot be retained by any other party to the case. Engagement letters are typically drafted for the retention of an *individual expert* based on the expert's qualifications, reputation, and likely opinions. The engagement letter is typically