Forensic Engineering Assessment of Fault Allocation of Involved Parties in Building Enclosure Defect Cases

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INTRODUCTION

Construction projects are complex in nature and involve multiple parties. Parties to construction projects include owners, design professionals (including several subconsultants who are retained by the design professional and/or the owner), a general contractor, construction managers, subcontractors, material manufacturers and suppliers, and testing laboratories. Any or a combination of these parties can contribute to building enclosure failures or performance shortcomings. In some cases, even when a party does not directly contribute to the issue, it may be forced to defend allegations for failure to prevent the defect. *Figures 1* through *7* show work by separate subcontractors who are involved in the installation and flashing of a window during a mock-up. If such a window leaks, any or all of those subcontractors will be involved in the dispute, not to mention various manufacturers, the designer, the general contractor, and the construction manager.

Figure 1 – The first subcontractor indirectly involved in the performance of this mock-up window is the subcontractor who installed the exterior sheathing and air barrier system.

Most building enclosure specialists and forensic engineers are knowledgeable in the investigation of building failures and the determination of the cause(s) of the failures. There are industry standards that establish evaluation, investigation, and testing protocols for determination of failure causes. However, there is little guidance for assessment of responsibility and allocation of damages to various parties. For this reason, forensic engineers involved in the assessment of responsibility for various parties often disagree on who should be held responsible for the defects or deficiencies, and to what extent.

This article endeavors to provide a systematic approach for valuation of responsibility and allocation of damages to parties involved in building enclosure litigation. This process is broken down into assessment of project delivery method, project design, building code requirements, the building official's role in reviewing and issuing a permit, compliance to the design by the construction team, and those involved in building operations and maintenance. In most cases, more than one entity contributes to a building defect. As an example, a contractor may construct a portion of the building in clear violation of the design documents. However, the design professional who was specifically engaged to perform site

observations to ensure quality is often cited as a contributing cause.

Analysis and allocation of responsibility is a complex issue that will involve legal issues as well as technical issues. The authors are not aware of any established procedure that can apply to every case. While the authors will not be able to provide a definitive methodology for determining allocation of responsibility that applies to every case or comment on the legal aspects of damage allocation, this article provides a recommended procedure to be followed in doing so, and it will list major issues that should be considered and analyzed in such an evaluation.

THE NEED FOR ALLOCATING RESPONSIBILITY

In most construction disputes, several parties are typically requested to provide monetary compensation to address defects and/or damages. The requested monetary compensation is typically related to the cost to correct defective design or workmanship, failed materials, and other design- or construction-related issues.

Forensic engineers who are asked to offer opinions on the cause(s) of the defects are also typically asked to opine on who bears responsibility for such defects. In many cases, simply opining on the parties who contributed to a defect is not sufficient to provide the trier of fact/law enough information to proportion the claimed damages among parties. As such, forensic engineers are often asked to opine on the proportion of responsibility when multiple parties have contributed to a defect.

It should be noted that a forensic engineer is not and should not act as the trier of fact/law. Proportioning damages to several defendants involves an understanding of the nature of the claims and the law. Forensic engineers should not engage in interpretation of law or offer opinions on legal matters.[1]

However, qualified forensic engineers can opine on the approximate proportion of damages by analyzing which party has primary responsibility for a defect and which party may have secondary responsibility. Any analysis that attempts to assign a specific numeric value to fault allocations may be the subject of scrutiny and debate.

Figure 2 – The second subcontractor involved in the performance of the window installation is the window installer. In this case, the same subcontractor is also responsible for installation of window perimeter flashing.

Figure 3 – The third subcontractor (or supplier) involved in the performance of the window installation is the window manufacturer.

Figure 4 – The window installer in this case was also responsible for installation of the sill flashing.

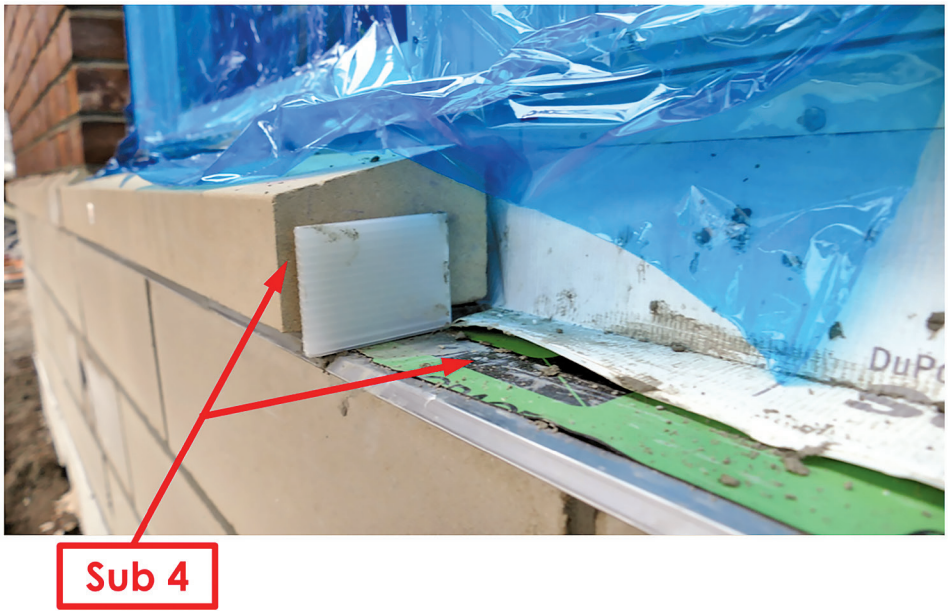

Figure 5 – The fourth subcontractor involved in the performance of the window is the masonry subcontractor who would have to properly integrate the stone sill through-wall flashing with the windowsill flashing.

Figure 6 – The masonry subcontractor is also responsible for installing the lintel through-wall flashing. This component can contribute to leaks if defective.

Figure 7 – The fifth subcontractor who can affect the performance of the window is the sealant subcontractor, who is responsible for the primary seal between the window frame and surrounding components.

QUALIFICATIONS OF FORENSIC ENGINEERS OPINING ON CONSTRUCTION DEFECT RESPONSIBILITIES

All forensic engineers must know their areas of expertise and limitations. Those who opine on the allocation of responsibility should, at a minimum, be knowledgeable in project delivery methods, contract forms, construction administration procedures, and the technical aspects pertaining to the particular construction system they have been asked to investigate.

GENERAL PROCEDURE FOR ANALYZING ALLOCATION OF RESPONSIBILITY

The following are basic steps that should be considered by each forensic engineer who is asked to opine on allocation of responsibility for construction defects. These steps are based on the authors' experience as forensic engineers who specialize in investigating building enclosure issues. Different procedures may be more suitable for other construction issues.[2]

Figure 8 provides a simple graphical flow chart that depicts the analysis steps.

Step 1 – Determination of the Failure Mechanism

Before a forensic engineer can opine on the allocation of responsibility, an analysis of the failure mechanism and what factor(s) caused the defect must be made. A forensic engineer can sometimes rely on findings and analysis by other qualified investigators for such analysis.

With respect to building enclosure defects, demonstrating that a defect exists does not necessarily result in determination of what went wrong.[3] Where water leakage is the primary issue, a thorough determination of the failure mechanism should include an analysis of water leakage paths, and an understanding of who was responsible for the defect(s).

Defects that result in construction claims can include design defects, workmanship issues, material incompatibility, sequencing problems, material/system failure, and/or improper/inadequate maintenance. However, allocation of responsibility for a failure is typically more complicated.

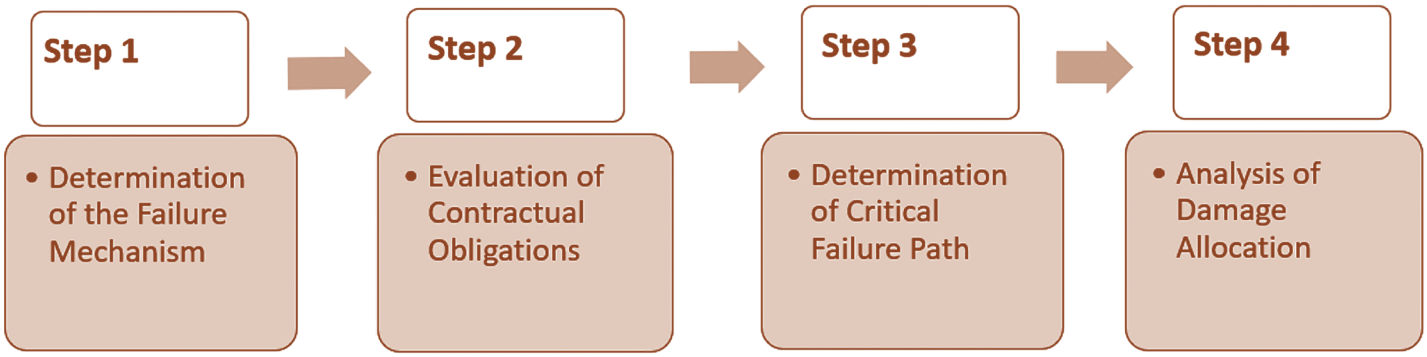

Figure 8 – Simple flow chart depicting steps to be taken to assess liability.

The following are some examples of such complexities:

1. Design of a building enclosure system may be undeniably faulty. However, if the construction of the building enclosure deviated from the design, the designer cannot be solely responsible for that failure. In cases where the construction of a building system is completely contrary to the faulty design, allocating fault to the designer as a primary contributor is not justified. In such cases, the party responsible for the deviation may have effectively assumed design responsibility.
2. The construction of a building system may undeniably violate the design. However, if the designer of record or other entities having responsibility for inspecting the work or performing quality control on the work did not note and report such defects, they may be considered a contributor to them. In such cases, the primary contributor will be the party that is responsible for violating the design. However, other parties may also bear secondary responsibility for allowing the defect to go uncorrected or unreported.

Step 2 – Evaluation of Contractual Obligations

The next step towards developing opinions regarding allocation of responsibility is to evaluate the contractual obligations of each involved party. This process should start with a review of the construction delivery method (e.g., design-bid-build, design-build, construction manager at risk, construction manager as advisor). While a discussion of these various construction delivery methods is beyond the scope of this article, *Figures 9* through *12* depict the con-

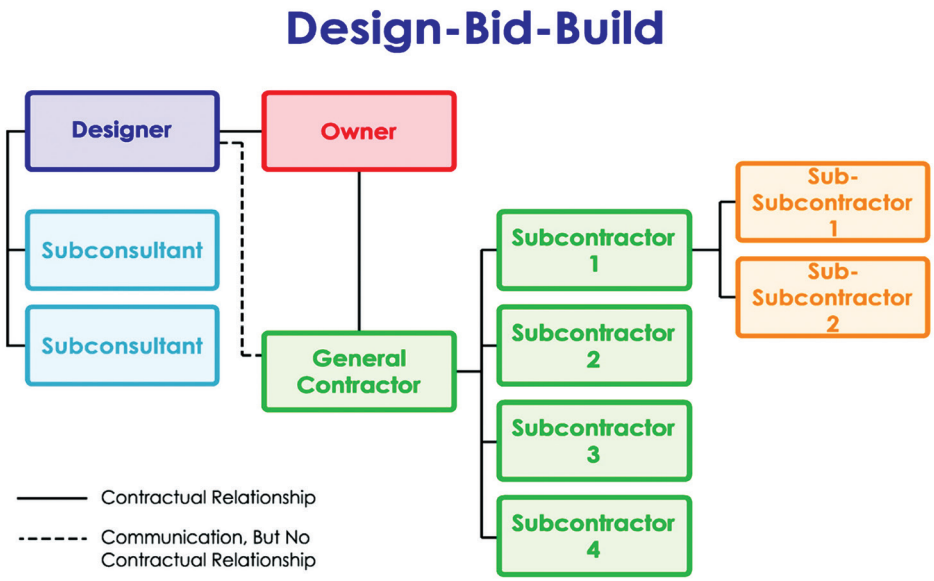

Figure 9 – Typical contractual lines of responsibility for design-bid-build project delivery.

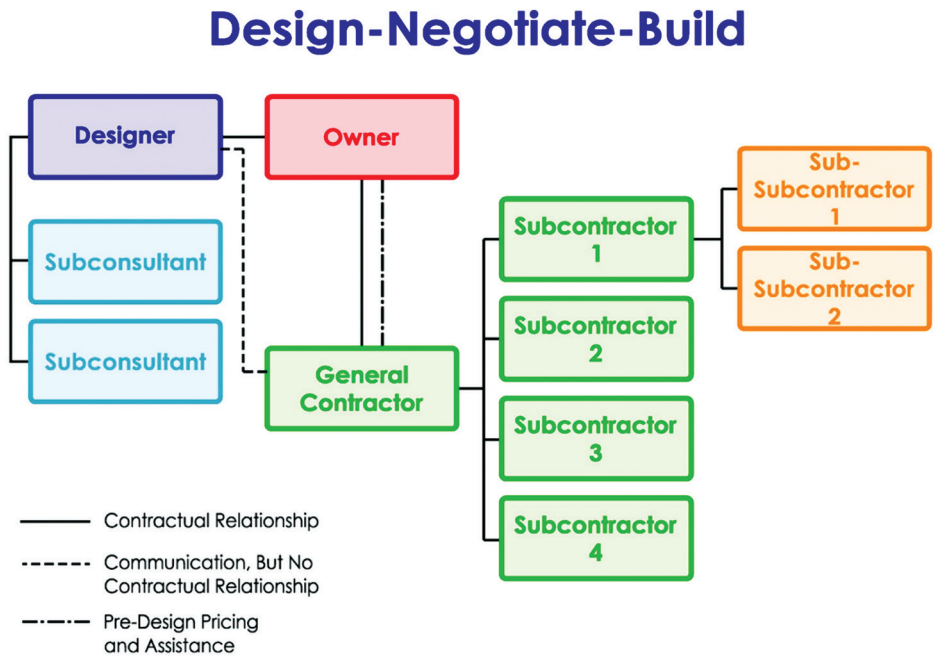

Figure 10 – Typical contractual lines of responsibility for design-negotiate-build project delivery.

tractual lines of responsibility for the most common construction delivery methods.

Knowing the construction delivery method can narrow down the range of responsibilities for each involved party. However, knowledge of construction delivery methods is not sufficient for determining contractual obligations for each party. In many cases, contractual obligations may deviate from typical contractual obligations, based on the project delivery method. Therefore, a review of each involved party's contract and scope of work is essential in understanding its contractual obligations.

It should be noted that contractual obligations of involved parties may have been changed during the construction process through contract amendments and/or change orders. Therefore, a thorough determination of each party's contractual obligations should include a review of construction records.

Step 3 – Determination of Critical Failure Path or Primary Responsible Party, and Secondary Contributors

Once the failure mechanism and contractual obligations of each involved party are known, an analysis can be made to determine the primary failure path and the party bearing primary responsibility for the failure or defect. The primary failure path is the event, error, omission, action, or failure to take action that directly results in the failure or defect. Such analysis should consider each phase of the project, from inception to post construction. The following is a discussion of typical considerations for each phase of the project.

Project Inception and Design Phase

A successful construction project starts from a good design. While some designs merely meet building code requirements or standards of care, they may not yield a durable product. Conversely, exceeding the standard of care does not necessarily imply adequate design.[4]

Many issues can arise during the design phase that may become the critical failure path. Despite common opinions by forensic engineers, not all critical failure paths during design are necessarily attributable to the design professional. The following are examples of critical failure paths that occur during the design phase.

1. **Delegated Design:** In most building designs with average or higher complexity, portions of design are delegated to the construction team or other entities. Therefore, a single entity is rarely responsible for design of all building systems. In such cases, the forensic engineer should analyze the primary design responsibility to design interfaces between systems designed by others, and coordination during construction. For example, exterior walls may be designed by the designer of record and its subconsultants, but the curtainwall system may be designed by the general contractor's curtainwall subcontractor. Neither the exterior walls nor the curtainwall system may be defective, but a defective interface between the two can result in water leakage. In this example, the forensic engineer must analyze the responsibility for designing the interface.
2. **Code Compliance:** In general, most construction contracts stipulate that the designer of record must design the building in accordance with the applicable building codes. Building codes are considered the minimum

requirement for design and construction of buildings. However, model building codes have evolved rapidly over the last two decades. In some cases, building code requirements tend to leap ahead of proven technologies, leading to early building enclosure failures that cannot be primarily attributed to the designer of record. As an example, recent changes to energy codes have mandated far more insulation in building enclosure systems. Additional insulation can increase potential for condensation and other moisture issues. In some cases, building code violations are alleged, but no consequences of such violations are experienced. In such cases, the intent of the code should be reviewed, and the possibility of meeting code requirements through alternative means or granted variances should be explored. In other cases, while the prescriptive requirements of certain code provisions are not met, testing may yield that the performance of the design system meets the intent of the code. Often these conditions are considered to represent technical deviations that do not require repair.

3. **Design Quality Assurance:** In some cases, the project owner may retain independent parties to review the design as it progresses. Many construction managers retained during the design phase may have responsibility for evaluating the design with respect to constructability. In some cases, owners also retain specialists to peer-review the design and provide comments for such design. In such cases, it is important to evaluate who had primary responsibility for review of the design. It can be argued that a designer of record is entitled to rely on reviews by specialists who should be far more knowledgeable in certain building systems. However, the primary responsibility for coordination of various design subconsultants or specialists should rest with the designer of record unless otherwise stipulated in its agreement.
4. **Design Integration and Coordination:** Conflicts in design documents are common. These conflicts exist between drawings and specifications, or between documents prepared by various subconsultants (e.g., conflicts between structural and mechanical drawings). Some subconsultant agreements obligate the subconsultant to coordinate its work with other subconsultants. Such requirements may be unfair and are rarely practical without coordination by the designer of record. The fairness of an agreement should not be the basis for the opinions of a forensic engineer; however, typical industry practices should be considered. Special consideration should be given to coordination with consultants who are retained directly by the owner and are not part of the design team. Such coordination is typically through the owner. However, the designer's contractual obligations may require that the designer perform such coordination.
5. **Durability:** A design may meet building code requirements and standard of care but may not yield a durable or well-performing building. In such cases, consideration should be given

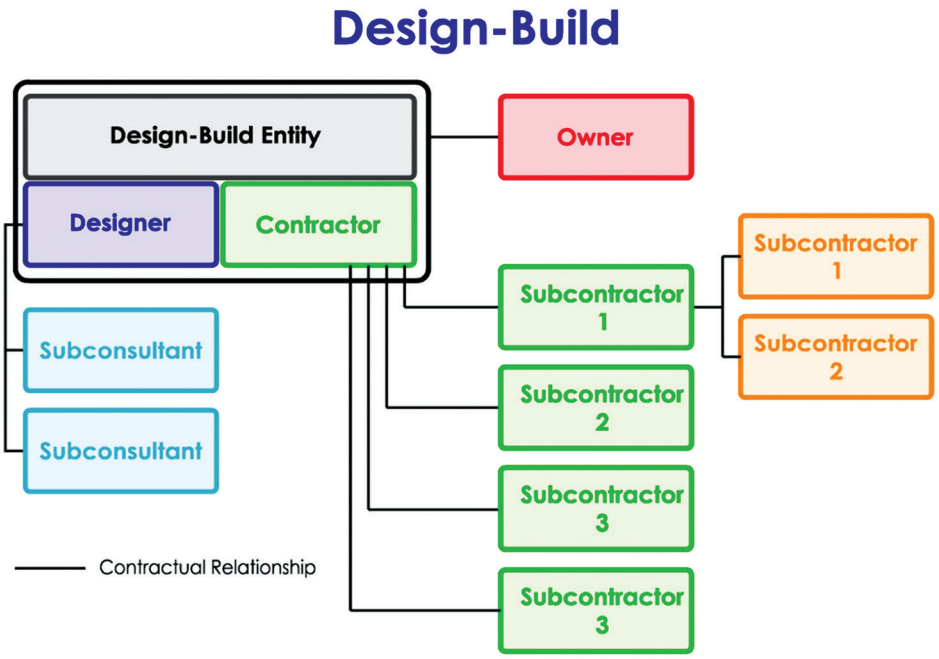

Figure 11 – Typical contractual lines of responsibility for design-build project delivery.

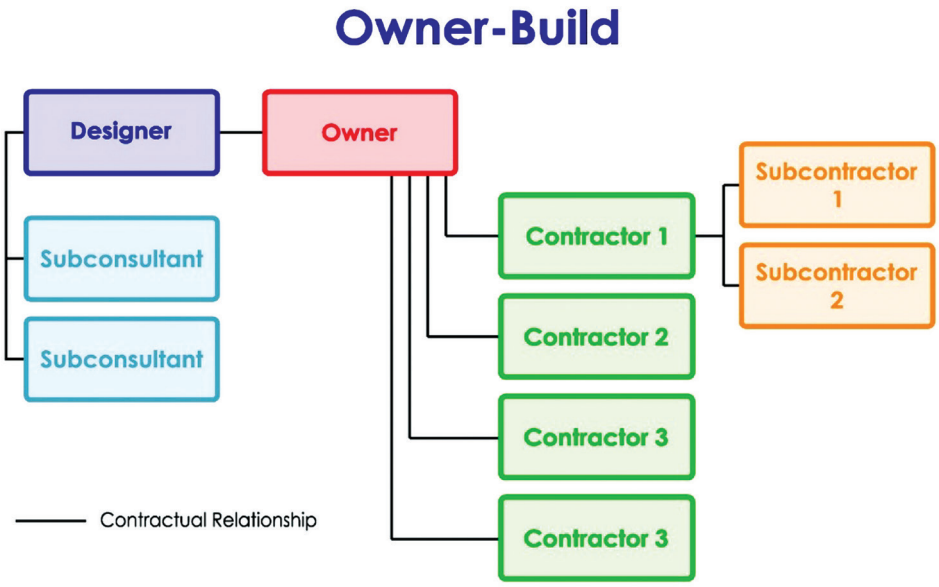

Figure 12 – Typical contractual lines of responsibility for owner-build project delivery.

All forensic engineers must know their areas of expertise and limitations. Those who opine on the allocation of responsibility should, at a minimum, be knowledgeable in project delivery methods, contract forms, construction administration procedures, and the technical aspects pertaining to the particular construction system they have been asked to investigate.

to reasonable expectations established through communications and contractual obligations assigned to the designer of record. It is common to uncover design phase communications which document directions given to a designer to modify a design to achieve a certain budget or aesthetics, even after the designer has informed the owner of potential ramifications of such modification. It is not unusual to encounter situations where the directions provided to the designer contradict the owner's program established through the initial programming phase of the project. The durability of a constructed building is directly related to the quality and workmanship of the construction. However, all buildings will require maintenance and repair, which should not be overlooked as a potential contributor to durability issues.

6. **Material Selection:** Designers are entitled to rely upon published or conveyed information provided by material manufacturers. When a specified product fails, the forensic engineer should consider if the product failed because it did not meet its advertised/published performance claims, or if it was unsuitable for the specified application. If a product fails to meet its claimed performance, the critical failure path is product failure, not improper design. On the other hand, if a specified product was not suitable for its specified use or it was incompatible with other materials, the forensic engineer should evaluate if the use of the material was based on any information from the manufacturer, or if it was merely selected by the designer and/or owner with no regard to such issues.
7. **Design Errors and Omissions:** As previously indicated, meeting standard of care for a designer does not necessarily imply adequate design. A set of design documents may include errors and/or omissions. Errors can lead to faulty construction and be considered a critical failure path. Omissions, however, are rarely considered a critical failure path. An omission can rarely result in faulty construction. For an omission to result in faulty construction, someone must decide how to construct a system that is not included or detailed in the design documents. The party responsible for constructing a system or component that is not designed by the designer may be ultimately responsible for its design.

Bidding and Value Engineering Phase

Many construction claims stem from value engineering practices during the bidding or negotiation phase of the project. Value engineering is defined as evaluating documented design to identify potential alternative methods, systems, or materials that will benefit the owner by enhancing the life cycle value of the project.[5] Commonly, designers start with prudent specifications that include higher-quality materials and systems. However, due to budget limitations, such quality materials and systems are subsequently substituted with lower-quality materials and systems. In many cases, value engineering proposals are initiated at the request of the owner and proposed by the general contractor or construction manager.

Once a value engineering proposal is submitted, the designer evaluates that submittal to ensure it meets the intent of the design. However, in some cases, the designer is not involved in the evaluation and acceptance of value engineering proposals. Most standard construction contract forms stipulate that substitutions proposed by a contractor must be of equal quality and intended for the same use. However, it is not always clear whether such requirements apply to value engineering changes.

If a value engineering change results in a critical failure path, the following issues should be considered by the forensic engineer:

1. Who proposed the value engineering change?
2. Did the proposer represent that the value engineering change was compatible with other aspects of the design and would not compromise the expected performance?
3. Did the designer take on responsibility of reviewing the proposed value engineering change to assess its compliance with the design intent?
4. Did the proposer of the value engineering change inform the owner of any ramifications of the change?

Construction Phase

Several issues during construction can constitute a critical failure path. The following is a brief discussion of most common construction phase issues:

1. **Permits:** In many cases, designers and contractors consider issuance of a building permit by the building official as confirmation that the design meets the building code. However, model building codes explicitly waive such implication and indicate that issuance of a permit should "not be construed to be a permit for, or an approval of, any violation of the provisions" of the building code. In addition, they indicate that "the issuance of a permit based on construction documents or other data shall not

prevent the building official from requiring the correction of errors in the construction documents and other data."[6] Therefore, the issuance of a building permit should never be considered by the forensic engineer as an indication that building code requirements or the intent of the building code were met by the design documents submitted to the building official. The only exception known to the authors is when a formal variance was obtained in accordance with the applicable building code.

2. **Issuance of Acceptable Inspection Reports and Certificate of Occupancy (CO) by Building Official:** Similar to issuance of permits, issuance of inspection reports by building officials accepting specific portions of a construction, or issuance of a CO is often used to imply conformance with the applicable building code requirements. However, model building codes specifically indicate that "approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction (Paragraph 110.1 of 2015 IBC)." Furthermore, "Issuance of occupancy permits shall not be construed as an approval of a violation of the provisions of this code or other ordinances of the jurisdiction."[7] Again, such approvals should not be considered by the forensic engineer as an indication that building code requirements or the intent of the building code were met by the as-built conditions.
3. **Defective Workmanship:** Defective workmanship or installation is a common cause for failure in construction assemblies. However—similar to design standard of care—perfect construction is not required by the building code or industry standards. While defective workmanship can readily be determined to be a critical failure path, other factors discussed herein may be considered secondary contributing factors to defective workmanship. In cases where defective workmanship was specifically observed, reported, and accepted by other entities, such other entities could be considered as primary contributing parties as long as they had the authority and responsibility to accept or reject the work. In cases where other parties with contractual obligations to perform quality control specific to the defective workmanship failed to observe and report such defective workmanship, they should be considered secondary contributing parties.
4. **Obligations for Quality Control and Testing:** During the construction phase, several parties may have varying or similar obligations for quality control, inspection, testing, and reporting defects in installation and workmanship. Depending on their contractual scope of services, architects may have limited or significant obligations to perform quality control inspections of the work. General contractors and construction managers often have contractual

obligations for quality control of the work. Other entities, such as an owner's representative, or testing laboratories retained by the owner or general contractor, may also have quality control responsibilities. It is not unusual for such responsibilities to overlap between various parties. In many cases, having a contractual obligation to perform periodic site visits during construction may not provide an opportunity to observe a defect that could readily be covered by subsequent construction. The contractual obligations of each party and their ability to observe the workmanship issues should be analyzed by the forensic engineer to assess if they can be considered a secondary contributor to a workmanship/installation defect. However, the failure of a party to observe, report, or otherwise affect correction of a defect is typically not considered a critical failure path.

5. **Requests for Information:** When design documents include omissions, ambiguities, conflicts, or errors known to the contractors, the contractors typically have a contractual obligation to issue a request for information (RFI) to the designer. The designer is then normally obligated to respond in a fashion that clarifies the issue (commonly referred to as a clarification notice). Contractors are typically not required to be designers and detect all design errors. However, contractors should be aware of industry standards, and when design requirements clearly violate such commonly known standards, usual contract provisions obligate them to issue an RFI to ensure the design intent is clearly understood. In some cases, contractors proceed with constructing a building system based on a partial set of design documents when a thorough review of all design documents may reveal that a different requirement was stipulated elsewhere. Such conflicts in design documents do not relieve the contractor of responsibility. This is because most construction contracts require the contractor to study the design documents and ensure such conflicts are noted and brought to the designer's attention.
6. **Substitutions:** During construction, materials and systems that are different from those specified by the designer may be substituted with other materials and systems. For example, a specified material may no longer be produced, or may not be available in time to meet the project schedule. In other cases, substitutions are made to reduce material costs, resulting in increased profit margins for contractors and/or decreased costs for the owners. Most industry standard construction contract forms stipulate procedures for substitutions and indicate that if a contractor proposes a substitution, it represents that the substitution is of equal or higher quality and is suitable for the intended use. When a substituted material is considered to be the critical failure path, the following issues should be considered:
   A. Was the substitution authorized in accordance with the procedures established in the contract?
   B. Who approved the substitution?
   C. Did the owner receive any benefits from the substitution (such as a credit towards the cost of the material)?
   D. Did the designer properly investigate the suitability of the substitution, and/or inform the owner of known disadvantages?
   E. Did the designer or any other construction team member rely on information provided by the manufacturer to base his or her decision on? Was this information found to be accurate when considering the failure that is being evaluated?
7. **Submittal Review:** Submittals during the construction phase consist of shop drawings, product data, product samples, etc. Submittals are an important part of the quality assurance process and record keeping for a project. They ensure that the specific products being used are submitted to the designer and/or owner prior to installation. The designer typically verifies that the submitted products or shop drawings are consistent with the intent of the design. Submittals may also consist of documents related to delegated design. For example, submittals for a curtainwall system may include shop drawings, product data, test reports, and calculations to demonstrate that the design of the system meets the requirements established by the design documents. The liability of designers in reviewing and approving the submittals has been debated for a long time. Standard contract forms stipulate that the designer only reviews the submittals for the purpose of verifying that the design intent is met. They also stipulate that review and approval of a submittal do not constitute approval of a substitution. In addition, several issues such as coordination with other adjacent systems and verifying dimensions or quantities on shop drawings are not the designer's responsibility. However, there are many issues that present challenges for forensic engineers when evaluating the role of the designer in approving a submittal. For this reason, when approval of a submittal is considered to be the critical failure path, the roles and responsibilities of all parties with regard to submittals as defined in their respective contracts should be carefully evaluated.
8. **Construction Means, Methods, and Sequences:** All standard contract forms known to the authors stipulate the contractor is solely responsible for construction means, methods, and sequences. Construction sequences can often result in a critical failure path. For example, the sequence of installation of window perimeter flashings should be carefully coordinated with the installation of the air/moisture barrier and overlaying cladding. The authors have had experience with cases where improper sequencing of various construction activities made it impractical to properly install window perimeter flashing. Although it is tempting to allocate responsibility to the contractor in such cases, the forensic engineer should consider the following before forming an opinion on construction means, methods, and sequences:
   A. Was the construction sequence dictated by the designer or the owner?

B. Were the construction means, methods, and sequences dictated by certain scheduling issues which were directed by the owner?
C. Did the contractor inform the owner and designer of ramifications of changing construction means, methods, and sequences?

9. **Lack of Involvement by Designer During Construction:** In some instances, owners decide to minimize or eliminate the role of the designer during construction. This results in design decisions and modifications being performed by the owner and/or the contractor (or subcontractors). If such modified designs result in a critical failure path, the forensic engineer must consider the following:
   A. Was the modification to the design relevant to the critical failure path?
   B. Which entity made the modification?
   C. Which entity approved the modification?
   D. Even if the original design was defective, but it was substantially changed by others during construction, who bears design responsibility?
10. **Undocumented Issues or Disputed Facts:** One of the most challenging issues for forensic engineers engaged in building enclosure litigation is sifting through documents and facts. In some cases, the volume of documents produced by various parties can exceed a million pages. Sifting through these documents to evaluate the processes and events during construction can be overwhelming. However, the opposite may also be true. In some instances, key issues related to a critical failure path may not have been documented. The authors have had experience with cases where elimination of air barriers or damp proofing system was not documented in any way. The fact is that witnesses' recollection of events leading to such undocumented issues can conflict since many of them either have a vested interest or struggle to recall events from a distant past. The decision on which fact witness or which set of documents can be relied on should be made by the trier of fact. However, in cases where the facts are not well established, forensic engineers are forced to decide which set of facts they can rely on. In such cases, the forensic engineer should ideally ignore disputed facts and rely on well-documented and undisputed facts. If this is not possible, then the forensic engineer should rely on documented facts rather than those provided by fact witnesses and their recollection of events.

Post-Construction Phase

Not all building enclosure or construction failures are due to the reasons discussed above. In many cases, post-construction events and decisions by the building owner may result in a critical failure path.

When evaluating a building failure and the contributing parties, the forensic engineer should consider the following:

1. Was the building or the particular system in question maintained properly?
2. Were any inadequate repairs performed that may have caused the critical failure path?
3. Did the environmental or loading conditions during service exceed the intent of the applicable building code or the original design?

Step 4 – Analysis of Damage Allocation

The discussions presented above provide guidelines for evaluating which parties involved in the design, construction, and post-construction phases of a project may have contributed to a failure. The forensic engineer should assess the critical failure path, then evaluate which of these parties may have contributed to the failure.

If asked, the next steps in the forensic engineer's assessment of responsibility may be evaluating the damages and allocation of such damages to various contributing parties. This step can be more complicated than determining the critical failure path. Since no consensus guidelines exist on attributing the percentage of damages to various parties, any opinion developed by the forensic engineer will be undoubtedly subject to criticism. Therefore, the forensic engineer should avoid developing opinions on exact percentages of damages that should be allocated to various parties, unless such exact allocations can be supported through reasonable scientific methods. It should be noted that in most cases, exact allocation of damages is determined by the trier of fact/law.

The forensic engineer should consider the following when analyzing the allocation of damages:

1. The entity or entities responsible for the critical failure path should be considered as primary contributors. Primary contributors should be assigned the largest portion of the damages.
2. For secondary contributors, the forensic engineer should consider whether the failure would be mitigated if the secondary contributor had not failed its obligations. If yes, some portion of the damages can be allocated to that party. If not, it is difficult to justify allocating damages to such a party.
3. In some cases, correcting one defect may necessarily involve correcting other defects attributed to other parties. For example, a window installation may have two deficiencies—defective manufacturing of the sash and defective perimeter flashing. In that case, replacement of the window is warranted, even in the absence of defective perimeter flashing. Conversely, the replacement of the window is not necessary to correct the flashing issues. In such cases, the forensic engineer should evaluate whether most of the damages should be attributed to the window manufacturer rather than the party responsible for perimeter flashing.

When calculating damages, the forensic engineer should also consider costs that the plaintiffs would incur even if the defects did not exist. For example, an exterior cladding system may be defective and may require repairs to correct the defects several years after its initial construction. However, the owner would have been obligated to perform maintenance work on the cladding material (such as replacement of sealant joints) by the time the repairs were needed. Since the repairs to address the defects will provide the owner the benefit of new sealant joints (a maintenance item), the costs associated with replacement of the sealant joints (including the scaffolding costs) should be deducted from damage calculations. This is because the owner would have incurred that cost regardless of the defects.

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