

# Importance of Clear Architect's Specifications in Design and Construction Phases

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The Design process and **construction phases** require Standard-of-Care precision and clarity at every stage of the creative process. In these detailed systems, clear specifications are critical to convey roles and responsibilities essential for making sure the built environment meets the expectations of all stakeholders. This clarity affects the quality of the final project and plays a significant role in any dispute resolution processes during or after construction activities, particularly in all forensic architecture analyses.

Forensic architecture is an emerging field that uses architectural techniques and technologies to investigate issues of Health, Safety, or Welfare of the public and, of course, the immediate parties in a project. This includes evaluating construction defects, structural failures, accidents, disputes, or crimes related to buildings, and infrastructure.

Located in Palm Beach, Florida, and Hilton Head, South Carolina, **Forensic Architect David Erik Chase, AIA**, is an experienced forensic architect. He can provide clarity on the most important big-picture issues or details to be included in the architect's design drawings and construction specifications, as well as project manuals. Continue reading for a brief overview of what individuals and businesses should know.

## What Are Specifications?

In the context of architecture and construction, specifications are written within a Project Manual prepared by the Architect-of-Record for the project. They are detailed written descriptions that prescribe the requirements for building systems, materials, workmanship, and quality standards to be followed during the construction phases.

These specifications serve as a bridge between the conceptual "design intent" and the final physical structure, providing detailed instructions that guide the execution of the project by the contractor(s). They're often used and intended to be interactive with drawings and graphic models to communicate the architect's vision and respond to the client's requirements.

Specifications are absolutely required to translate design into reality through logical organization of interdependent subject matter items and divided categories, including:

- **General specifications:** These include the overall project scope, general requirements, and administrative details such as project timelines, safety protocols, and environmental considerations.
- **Materials specifications:** These outline the specific materials to be used in the construction, such as concrete, steel, glass, and finishes, including their qualities, performance standards, and compliance with relevant regulations.
- **Workmanship specifications:** These provide guidance on the level of craftsmanship required for various aspects of the construction, such as masonry work, carpentry, and electrical installations.
- **Performance specifications:** These specify how the building or component should perform in terms of durability, thermal efficiency, acoustics, safety, and other functional requirements.
- **Regulatory compliance:** These specifications make sure that the construction process adheres to local building codes, regulations, and standards.

Let's take a closer look at how specifications affect the design process.

## **Specifications in the Design Phase**

In any project, the design phase is critical, as it translates abstract ideas into tangible plans for construction. During this phase, a clear outline and then finalized specifications make sure that the design intentions will be effectively communicated to the contractors and builders. The architect is reliant on industry formats and sub-set performance systems and product descriptions, building code requirements, and reliance on experience to produce a personal Project Manual for each project.

Without well-written specifications, there can be ambiguity, misinterpretation, or disagreement over how the design should be implemented. This can lead to costly mistakes, delays, and system failures, such as the building envelope resulting in water/moisture intrusion.

For architects, specifications provide an opportunity to codify their vision into tangible requirements. As the design is translated into construction documents, specifications offer precise instructions for how every component should be constructed and assembled, including building code compliance.

For contractors and builders, specifications are vital in determining the exact materials and methods to be used. With clear specifications, contractors can more effectively plan the construction process and schedules, order the right materials, and allocate labor resources.

# Specifications in the Construction Phases

Once construction begins, specifications become a contractor's critical tool for monitoring and managing the project.

As work progresses, contractors refer to the specifications to make sure every step of the process aligns with the planned design and quality standards. Architects, building inspectors, and construction project managers also rely on specifications to verify that the construction complies with regulatory codes and safety requirements. This process requires the contractor to submit documentation to the architect.

Clear specifications also help mitigate disputes during the construction process. Conflicts between architects, contractors, and clients can arise when there is a lack of clarity about the scope of work or the quality of materials. Well-written specifications provide a common reference point that can be used to help resolve any disputes.

Furthermore, clear specifications are essential for making sure that the final product is built to the intended standards. From the building's structural integrity to the systems and finishes applied in the interiors, specifications provide guidance to ensure that all elements of the project meet the required performance and aesthetic criteria.

## What Is Forensic Architecture?

Forensic architecture is a field that applies architectural analysis and techniques to investigate incidents, accidents, or crimes related to the built environment. This could include investigating building collapses, structural failures, accidents, or even incidents related to political violence and human rights violations.

Forensic architects use a range of tools and methods, such as digital modeling, 3D scanning, GIS (Geographic Information Systems), and photogrammetry, to reconstruct and analyze incidents. These methods allow forensic architects to piece together the circumstances surrounding a specific event and determine the causes and effects.

Forensic architecture is particularly useful in legal contexts, where Architects are called upon to provide expert testimony or create visual evidence to support legal cases. The analysis provided by forensic architects can be used in courtrooms, insurance investigations, and accident inquiries, helping to clarify the causes of incidents and assign responsibility when necessary.

## How Clear Specifications Aid Forensic Architecture

Clear and code-compliant specifications are crucial in forensic architecture because they serve as a key reference for understanding how a building was intended to perform and how it was to be constructed.

In cases where something goes wrong—whether it's a building collapse, a fire, or a system defect—experts rely heavily on these specifications to determine whether the design documentation was initially correct and then followed correctly and if the building's construction met the required standards.

Clear specifications also help forensic architects determine whether the design itself was flawed or whether the failure was due to poor construction practices. If specifications were not followed or if the materials were subpar, the investigation could uncover the root cause of the problem.

In cases of criminal investigations involving the built environment, clear specifications help forensic architects assess how the building was constructed and how the event might have impacted the structure. These specifications can be used to identify weak points in the design or construction that made the building vulnerable to damage.

## **Legal Implications in Forensic Architecture**

Forensic architecture is often used in legal settings, where the findings of an investigation can have significant consequences. Clear and current specifications are essential in these cases, as they help to bench-mark whether the construction process adhered to the contract documents, accepted standards and whether any negligence or malpractice occurred.

For instance, if an accident occurs due to a construction site incident or structural failure, Forensic Architects may be called upon to analyze whether the building's specifications were followed. If it's found that the specifications were not correct and/or met—whether due to architectural or contractor error, misinterpretation of design, or substandard materials—this information can contribute to ultimately holding those determined responsible accountable.

In cases of human rights violations or political violence, forensic architecture can also play a critical role. By analyzing the design and construction of buildings or infrastructure used in these events, forensic architects can help to identify whether building design flaws contributed to the vulnerability of the building or whether the building's design was altered for other reasons, not design or construction processes.

## **Contact a Forensic Architect for More Information**

Well-drafted specifications and integrating the design intent depicted in the drawings will be the key to successful projects. Oversight from an experienced forensic architect can help avoid common errors and make sure the project goes according to plan. The industry reference documents in my opinion, should be a reliance in general to the Construction Specifications Institute, founded in 1948, offering a continuous dedication to the development and improvement of specification standards and formats.

With a firm based in Palm Beach, Florida, and Hilton Head, South Carolina, Forensic Architect David Erik Chase, AIA, has over 20 years of experience as a forensic architect, construction expert witness, and arbitrator, and 55 years as a registered practicing architect in 21 states and the District of Columbia.

Contact Mr. Chase today for assistance in the process of well-written, integrated design and construction documentation to foster, "Clear Specifications in the Design and Construction Phases" of upcoming projects. ([d-chaseforensicarchitect.com](http://d-chaseforensicarchitect.com)).

Disclaimer: David Erik Chase is a registered architect in 22 states and not an attorney. The content of this article is intended only as a general overview of process and not a representation for guidance or any legal professional opinions, as advice. (Nb. Legal consultation is always advisable in this entire process.)