
A Profession Ripe for Change

AN EVOLVING PROFESSION

Up through the early 1980s, most architectural firms in the United States employed a craft approach where proficiency with the tools of the day – pencils, pens, and instruments such as T-squares, triangles, parallel bars, and compasses – took time to develop. These were used with drafting media such as sheets of vellum (paper) or plastic mylar to create drawings. Along the pathway to mastering the art of drafting, with the requisite line weights and consistent lettering, one learned how buildings were put together and detailed. With some exceptions, firms were generalist in nature and worked on a variety of project types within a limited geographic area (Figure 1.1).

During that same decade, profound changes began to happen driven in large part by the emerging revolution in technology and a little later with globalization. With the ability to both communicate in real time and travel inexpensively, the consolidation of architectural and engineering firms began to occur. Fast-forwarding to the 1990s and beyond, this led to the creation of many large, multinational corporations that offered a global presence, skilled financial management, deep pools of talent, and the resources to market their services. In the United States, organizations of 30–100 people appear to have been the prime targets for acquisition. Sole proprietorships and small firms were mostly spared and to this day still comprise the majority of design practices. They continue to thrive by having the ability to deliver projects less expensively due to a lower cost structure and inherent agility. Lacking the depth of talent and other large firm advantages, many offer boutique and personalized services, while others leverage local and political relationships to compete with medium- to large-sized firms, by whom they are often engaged as local partners.

WHERE WE ARE TODAY

Professional practice today is quite different and continues to evolve at a rapid pace. Most large practices are organized into one or more specialized market sectors offering a breadth and depth of knowledge in building types such as hospitality, K–12, industrial, retail, higher education, office,

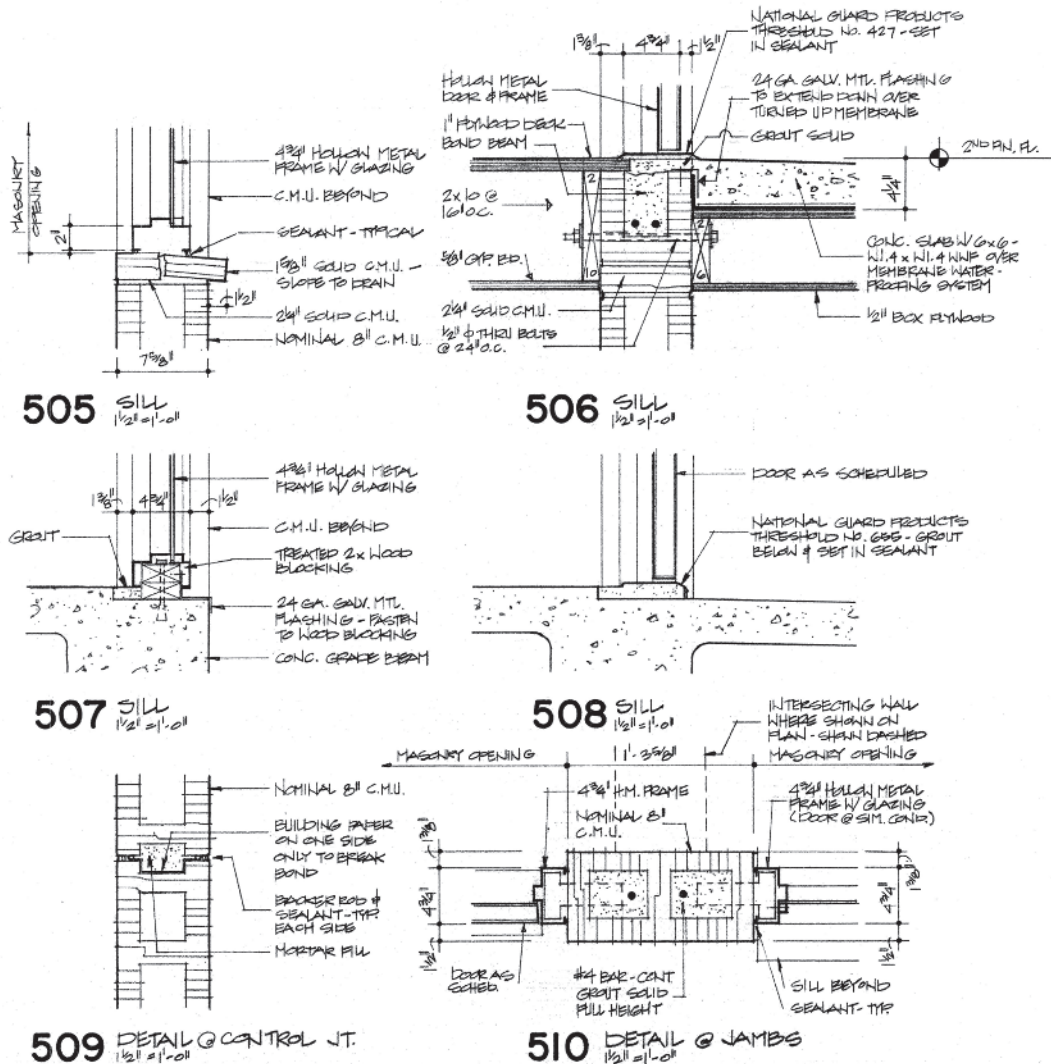


FIGURE 1.1 Hand-drafted details.

and healthcare. Great value is placed on aesthetic design for its own sake as well as the building's performance relative to its environmental impact and resiliency.

Design-side project delivery has become a more complex endeavor with multiple project stakeholders and varying options for construction. Design-bid-build is no longer the de facto method, with alternatives such as design-build, construction manager at risk, integrated project delivery (IPD), and some other variations commonplace in the United States.

In terms of architectural project delivery, the following challenges can hinder firms from consistently delivering projects with excellence:

- **People:** Most employees today are college graduates and arrive with a working knowledge of the software and hardware tools in use. In times past they would serve in an apprentice type role and learn the tools of productivity from seasoned professionals. The inverse is often true now where those individuals with the knowledge of building systems and constructability are not proficient with tools of design and production.
- **Materials:** Building systems have become proprietary and multifaceted. Traditional exterior materials such as masonry, stucco, and glazing remain in use; however, manufacturers have created significant differentiation within individual products and systems. Advances in building materials science has created new classes of products with elevated performance characteristics.
- **Regulation:** Building codes, accessibility standards, and other forms of regulation have increased and often overlap with each other.
- **Time:** The desire for return on investment and the ability to communicate information immediately have served to increase expectations for more rapid project delivery. The companion to this is an expectation for nearly concurrent decision-making.
- **Environmentalism:** The oil embargo of the mid-1970s and concern for the earth have brought energy efficiency to the forefront of design with a greater focus on long-term building performance as well as understanding the health effects of the materials used. The goal of carbon neutrality is now at the forefront of sustainable design.
- **Litigation:** For many of the reasons noted in this chapter, the design professional's risks have increased.

Each decade and generation see both dramatic and evolutionary changes that create new challenges to the profession and that can get in the way of delivery excellence. Project delivery must adapt and transform with the times we are in.

THE PRIMARY OBJECTIVE

Some would say that the American game of football has become the favorite pastime in the United States. As with most team sports, football has one objective: to score more points than the opposing side before time runs out. It is a complex game with sophisticated strategies and plays. The stakes can be high, and teams employ a formidable array of talent on and off the field to gain the slightest advantage. Football is also a simple game as the only goal is to move the ball forward on offense while the opposing defense tries to thwart that effort. Each team takes turns doing this.

In many ways, the architect's objective, like football, is both complex and simple.

The architect's primary objective, at the most basic level, is to obtain work and progress it through the firm. The movement forward of a project is the mechanism for billing, and there are few situations where the timely advancement of work is detrimental.

Many firms closely monitor their project financials to determine if they are making money, but few engage in systematic efforts to get better at delivering their work. They do not devise strategies or create different plays to move the ball forward, so to speak. By contrast, significant effort is expended by sports teams just to prepare for a single game, let alone the entire season.

Sometimes we make our work more difficult by introducing other objectives that get in the way of advancing the work. Peripheral industry initiatives, the pursuit of profit at all costs, and keeping up with changing technologies can create distraction and, if we are not careful, become a hindrance themselves. While each of these has a place, a fine line exists between distinguishing what brings ongoing benefit versus wasting time and effort on various objectives for their own sake.

SOUTHWEST AIRLINES

In an interview with *Slate* (“The Southwest Secret – How the airline manages to turn a profit, year after year after year”), an executive with Southwest Airlines discussed their ongoing growth and continued profitability (Figure 1.2). He noted that Southwest realized they only made money off their planes when they were in the air. (<https://slate.com/business/2012/06/southwest-airlines-profitability-how-the-company-uses-operations-theory-to-fuel-its-success.html>) They focused their operation around this idea and worked purposely to keep operations simple. Southwest flies only one series of jets, the Boeing 737, which makes aircraft training and maintenance for pilots and mechanics less complicated. Boarding procedures are streamlined by not assigning seats. This makes logistics easier when a plane is taken out of service as another 737 with a comparable seating layout can be used. “Bags fly free” reduces delays from last-minute baggage handling at the gate. Every



FIGURE 1.2 Southwest Airlines.

effort is made to facilitate rapid boarding and deplaning of the aircraft. Southwest primarily flies point to point with quick turnarounds of their aircraft.

Southwest works hard to provide great client service, and they know how to market well. Nonetheless, the goal and focus of their operation is to keep planes in the air.

If the architect's and engineer's goal is to advance projects, we want to simplify the effort to do that and eliminate everything that hinders or distracts. Yes, it would be short-sighted to think that obstacles will not arise from many places, but consider that one of your jobs is to identify and mitigate them, reducing the negative effects to the greatest extent possible.

The less complicated we make it for staff to perform their work, the more likely projects can move ahead without the wasteful iterations caused by overcomplexity and lack of clarity. Likewise, the easier it is for our clients to comprehend our ideas and recommendations, the less likely redesign will occur due to misunderstanding.

DISTRACTIONS

It would be humorous if the focus of a sports contest were to shift to the players uniforms in lieu of the strategy to win the game. The head coach's fashion sense would become more important than the team's wins and losses. Much comparison and commentary could be made with fans casting votes on which teams' uniforms are the more innovative and fashionable. Players could add embellishments reflecting their personal interests, aesthetic taste, or even current or past events. It might become important whether the uniforms were locally tailored or made in another country. They could also be evaluated on the technologies incorporated within the uniforms along with the fabric's intrinsic properties and performance data. We might also establish a formalized process and create requirements to certify uniforms for use by players. Imagine the controversy if a jersey were found to have missed a step in the certification process and one of the colors was a shade off – cancel the game!

Who does not enjoy well-designed apparel and seeing their team's attire change from game to game? Ultimately though, they are still judged on whether they bring home victories! In the same way, if the design professional's job is to deliver projects well and progressing the work is the mechanism for billing our clients, it is in our interest to become exceptionally good at moving projects ahead and to minimize distraction.

The following list highlights practical goals and ways we can begin to work differently when we look at our firms through a different lens:

- Learn how to better communicate with clients using graphics and 3D.
- Create tools and processes to guide the decision-making process.
- Understand what your consultants need to perform their work well and make sure they get it in a timely manner.
- More effectively organize geographically diverse teams.

- Devise uncomplicated ways to utilize software.
- Strategically model and draw less by understanding when and what to model and creating methods for dealing with repetitious information.
- Make deliverables and documents easier to produce, understand, and navigate by end users.
- Design and engineer projects concurrently. Too often, current practice, even with constructability reviews is a sequential process unable to prevent wasteful iterations. As much as possible, do work correctly the first time. Understand when *right* is not defined as what one thinks but what one knows.
- Raise the awareness and expectation for skillfully put-together buildings that well express the design intent. After all, is it acceptable to poorly deliver great design, or any design for that matter?

Common sense, logical, reasonable, and pragmatic are just some of the adjectives that can be used to describe approaches like these. We will examine many of them in this book and encourage you to rethink your firm, as the profession is ripe for change.