



THE FUTURE OF PARKING DESIGN



By Timothy Haahs, PE, AIA

Creative, innovative, and sustainable parking, and how it will enhance growing cities.

To know our future, we need to know our history.

From the beginning of human history, shelters followed human settlement. Architecture most often reflected human needs, creating structures that were primarily fundamental and functional. As civilization evolved and developed in complexity, the idea of architecture was invented—perhaps it is more accurate to say “created.” Shelters became buildings and housing, gathering places became cathedrals, coliseums, and plazas. As transportation evolved, we constructed places and buildings around train stations, ports, and other modes of transit.

During this transition, architecture wrestled with two opposing forces: to design for function, or to design to depict one’s greatness, ability, and standing in society.

Architecture is about people first. Buildings exist to serve the needs of people. Architecture is not merely about design. It responds to people and our needs, desires, and societies.

It is often stated that form follows function—not function follows form. By the same concept, design should follow people and not the other way around. It is true that a great design may attract many people. I would argue that great architecture is designed to respond to the needs of human tendencies, desires, and a deep psychological need to belong.

Architecture is not static; it is dynamic. To see the direction of architecture, one needs to see the natural tendencies of people. Among many other things, architecture became a way to demonstrate authority through the design and construction of dignified and stately government buildings and towering, elaborate cathedrals. Some buildings became synonymous with honor, majesty, and power. But some buildings began to reflect not mere pride but egotism, as in the biblical Tower of Babel. The tower was designed to impress others with its sheer size and stature, but missed the point on function and serving the needs of people.



Architecture Reflects History

When you walk down a main street, such as Market Street in Old City Philadelphia, or experience the grand plazas of Florence, Italy, it is evident that you are taking a step back in history and into the architectural style of a different era. The cobblestone street of Elfreth's Alley in Old City and Ben Franklin's print shop are testaments to that momentous period in our nation's history. The detailed and elegant architecture of Florence's buildings, plazas, and statues inspire awe in children and adults alike, as they are transported to the time of the Medici.

More recently, much of the more utilitarian style of architecture in the 1960s used natural concrete. Many of the parking structures in our cities are demonstrative of this functional and simple approach. As early as two decades ago, with the availability of software to better analyze material and form, irregularly shaped buildings, with a creative presence and signature design elements, began to emerge in our skylines. And just about a decade ago, metal screening as an art form came into its own in a variety of building façades.

How Parking Design Evolved

The parking garage designed to store cars for commercial use began to spring up in the early 1960s. At that time, they were considered merely accessory structures—many of today's building codes and zoning ordinances still refer to parking garages as accessory structures. It was acceptable to consider parking strictly utilitarian in nature. And they continued to serve as functional structures designed for a singular purpose: to store cars.

However, over the last two decades, the focus has shifted to the security and safety of the people who park their cars in these structures. Design details emerged to enhance the environment, improving safety from a variety of elements: better, more even lighting; increased visibility and lines of sight; glass-backed elevators and open, well-lit stairwells.

And now in the last 10 years, we have turned our focus past mere function to the façade. Function is still critical to the success of both the architecture and the business of parking, but the value and impact of the façade has been recognized for its inherent worth.

Façade design can make or break a project. Renderings, physical models, 3-D modeling, and other visual depictions are now essential in the design and approval process. It matters what parking looks like, no matter the purpose. To serve high-rise apartments, train stations, and town centers, the architecture of parking is now of critical importance. Metal façades, LED lighting, murals, and art installations each add more than sheer aesthetic value. They increase the sense of place to serve the people that use and view the structure.

The integration of a healthy mix of uses further demonstrates the need for architecture to serve people. The buildings we design affect not only the people who enter them, but also the passersby and the surrounding neighborhood or context. We often provide retail and other uses at grade to activate the streetscape and serve related and auxiliary needs to the parking structure itself. The complementary nature of this mixed use is indicative of our complex society and changing needs (and desires) as people. Millennials, in particular, choose to live in urban and semi-urban walkable neighborhoods, and our architecture has begun to respond to that shift. It is my premise that we will not feel the full impact of that shift until the next generation (post-Millennial), who will have experienced a more urban lifestyle all along with a reduced pressure to drive.

Sustainability

The environmental movement has certainly made its mark on building design. The United States Green Building Council's Leadership in (LEED) rating systems have transformed real estate, creating a higher environmental and energy efficiency standard. While any rating system



will have mixed reviews, LEED has made its effect on our industry as well. While many of our structures cannot pursue LEED certification, we use many of the measures in LEED as best practices, adopting what is particularly relevant.

The emergence of the IPI-affiliated Green Parking Council looks to take this standard to the next level, but with a specific focus on structured parking and surface lots. Green roofs on many buildings, including parking structures, create stormwater infrastructure, often along with additional park and recreation space for people. Architecture continues to respond to the needs of people in primarily urban environments, to enhance their lifestyles through amenity space. The future of architecture will inevitably incorporate sustainable design elements, which will affect and shape our next generation of buildings. Green walls, pocket parks, and cool roofs further shape our facades, designs, and public spaces.

Future Trends

Technology will affect design, and new materials will evolve the look and shape of future buildings. The implications of technology are broad, and include adaptations for electric vehicle (EV) charging stations, car share programs such as Zipcar and Car2Go, and mobile applications for payment and reservations.

Sustainability measures will increase in intensity and effect. Building and municipal codes are shifting as well, electing to utilize the International Green Construc-

tion Code, or mandating LEED standards for certain building types.

Development is dependent on the successful provision of parking, and parking can serve as a catalyst for development, redevelopment, and revitalization. The fact that surface lots are now considered landbanks in our cities will offer opportunities beyond the traditional stand-alone parking structure, and reveal the shift towards public-private partnerships and truly integrated mixed-use.

More design effort will be devoted to active security measures to create buildings that are more comfortable for parking patrons. In the past, the designer focused on passive measures such as visibility, glass-backed elevators, and good signage. Active measures include security surveillance and technology integration, but more importantly, they include finding ways to draw people into and around the facility, namely, through extensive retail both within and around the facility.

Architecture is about people first. And so is parking. We design and build parking for people to use as a destination not in its own right but as a way to get where they really want to go. These technology-heavy, more sustainable, mixed-use parking structures still exist to serve the needs of people. But their design and aesthetics have improved dramatically. I am excited about what the future holds, and what we have in store for us, as planners, architects, engineers, and parking professionals. 



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