



Past, Present, and Future

*What industry experts
think about predicting
parking demand.*

Compiled by Mark Santos, PE

IT'S NO SURPRISE to avid readers of this magazine that our industry is changing rapidly. Technology can both increase efficiency and cause disruption. Mobility solutions affect and transform consumer behavior.

Nevertheless, parking owners and operators need to be able to predict with some certainty and plan ahead for business models and finances beyond the near-term. IPI's Planning, Design, and Construction Committee took on this topic to share its members' expertise and perspective on how to both be flexible and functional in assessing parking demand now and into the foreseeable future.

How has parking demand changed in the last 10 years?

In the car-centric U.S., people still rely heavily on their cars, keeping overall parking demand on the increase. However, in the past 10 years, the market has become far more thoughtful about determining the right amount of parking needed to support a project, rather than simply building a large structure. This means more emphasis on right-sizing parking in the form of shared parking, promoting alternative modes of transportation and ride-sharing, and innovative approaches such as mechanical, automated, and/or valet parking designs to create greater capacity in a smaller footprint or volume of space.

—Matt Davis, Associate Principal, Watry Design

In short, from my experience, technology, technology, technology. Most operators in the industry have gone from manually collecting data and/or issuing credentials for permits in person to completely virtual and permitless systems. Today, most parking agencies rely on data generated from all parking applications to make decisions in real time.

—Melissa D. Yates, CAPP, Access and Parking Manager, City of Boulder, Colo., Community Vitality

In the past 10 years, the U.S. population has increased from 304 million to just less than 327 million people today. This growth in population, lower gasoline prices, lower unemployment rates, and a consumer preference for single-occupancy vehicles have supported increased levels of parking demand in the U.S. in the past decade.

—John Bushman, PE, President/CEO, Walker Consultants

The more general answer is that it has grown substantially, but it depends to what demographic area you are referring. I see both ends of the spectrum in my two cities (Charleston, WV., and Columbus, Ohio). Columbus has a deficiency of available spaces downtown by almost 6,000, and in Charleston, garages in the city struggle to achieve 60 percent capacity. I believe that parking demand and economic demographics go hand-in-hand.

—Jonathan Brown, Senior Manager, SP+

The Experts



James Anderson
Regional Sales Manager,
Watson Bowman Acme Corp.



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Project Manager/Director of
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Ken Smith, CAPP
City Parking Manager,
City of Omaha, Neb.



Melissa D. Yates, CAPP
Access and Parking Manager,
City of Boulder, Colo.,
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Are cities changing zoning ordinances? If so, how?

In the past few years, we have been involved in a project that successfully became the first approved, shared parking study in a particular urban municipality. Although the shared parking concept has been around for quite some time, much backup information and rationale was provided to the municipality for consideration. Long story short, each municipality is in a different life stage when it comes to parking demand.

—Mark Santos, PE, Associate, Kimley-Horn

Recently, every municipality we work for has asked for a review of its zoning ordinances and an opinion as to their appropriateness. Some municipalities are attempting to implement parking maximums. Many are lowering their parking minimums. Nearly all are considering language that will allow for exceptions to the zoning requirements with the introduction of shared parking, whether based on an analysis of the anticipated needs of a mixed-use project or through mutual agreement with neighboring property owners.

—Eric Haggett, Senior Associate, DESMAN

Many cities are becoming more progressive about moving away from traditional parking ratios when it comes to how much parking is really needed to support a project. This means carefully analyzing supply and demand, the needs of targeted user groups, and availability of alternative transportation to come to the right number. As land and construction costs continue to go up, further increasing the cost to build parking, it is crucial to work with a team and the governing municipalities to determine what is right for each project.

—Matt Davis

What is the effect of Uber and Lyft?

Transportation network companies (TNCs) are affecting parking demand most notably in the hospitality and aviation markets. Hotel parking demand impacts vary considerably by location. For example, one Scottsdale, Ariz., hotel reports that only 15 percent of hotel guests bring vehicles to its property. Conversely, in Naples, Fla., which is almost an hour away from the nearest major airport, a majority of hotel guests have vehicles. Airports are reporting reductions in parking demand, but most of these reductions have

been in the single digits as enplanements continue to increase. TNCs are having a big impact on replacing taxis at airports.

—John Bushman

As more and more people use ride-sharing services as opposed to driving their own cars, the biggest effect on parking is drop-off areas. If a car takes you directly to the front door of a facility instead of to a garage, major upgrades to loading and unloading zones will be needed to accommodate the increased congestion. This is especially true for facilities such as corporate and medical campuses that experience peak traffic times with employee arrivals and departures or shift changes. In a future dominated by autonomous vehicles (AVs), this will be even more prevalent as it is likely humans won't ever have a reason to enter a parking structure. Evolving parking design to place more focus on the drop-off is a practical thing we can plan for today without knowing what the future will hold.

—Matt Davis

An ultimate reduction in on-street and garage parking demand in urban metropolitan areas is the effect, especially in evening entertainment districts, though they currently remain highly congested. There are also added vehicle drivers as Uber and Lyft practitioners cruise waiting for fares. Planners are looking to safely increase vehicle pick-up/drop-off areas to accommodate this increasing phenomenon.

—James Anderson, Regional Sales Manager, Watson Bowman Acme Corp.

I believe that the question centers on how cities bridge the gap from single-occupancy vehicles to other modes, including TNCs. Financially, politically, developmentally—all aspects need to be considered, and fundamental decisions need to be made now. Curbside management will come to the forefront as cities are challenged to accommodate different modes.

—Ken Smith, CAPP, City Parking Manager, City of Omaha, Neb.

The TNCs have changed the way we do business in a municipal environment relative to curbside offerings to the companies. How do we meet their drop-off and pick-up needs, where do we allocate them curbside access, and do we charge them for the sacred space?

—Melissa D. Yates, CAPP



Owners are expressing interest in exploring the potential for adaptive reuse of parking structures.

Although it is impossible to really project the effect of autonomous vehicles on future demand, are clients paying for future flexibility/adaptive reuse?

This is a big topic in the industry. We know it's coming, and we are having discussions now to predict uses. In our environment, we have districts that have been developed and are taxed, who are represented through boards and commissions who oversee how are parking and access infrastructure are used. However, at this time, we are unsure of the impacts long term.

—Melissa D. Yates, CAPP

There's plenty of discussion about new parking garages incorporating flexibility for different future uses. However, several current municipal and university projects do not have the additional funding to accommodate a future use, and possibly more importantly, they do not have the vision for the future use. I do believe the discussion should still continue.

—Mark Santos, PE

I have had developers as well as contractors tell me that they were not willing to pay the initial cost premiums. But I think it depends on the client. If the client is a parking authority, they are likely going to continue to operate the structure as a parking garage—so they are not investing in conversion strategies. Developers

who build garages aren't willing to pay the premium for the conversion strategies either, as they will likely not hold onto the property long enough for this to be an issue. Large institutions may be interested in this concept as hospitals and universities tend to hold onto their assets for a long time and become more land-locked as they grow.

—Michael App, AIA, LEED AP, Project Manager/
Director of Architecture, Timothy Haahs & Associates, Inc.

Owners are expressing interest in exploring the potential for adaptive reuse of parking structures. They want to know the facts before they make an investment in parking. They want to know when we can expect AVs and the effect these will have on parking demand. They also want to know how much it costs to design and build a facility that could be converted to another use in the future if that parking is no longer needed. We are seeing very few owners opt for spending dollars on adaptive reuse features.

—John Bushman, PE



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