Developing Parking Facilities in the Modern Day: Preparing for the Future

BY ROBERT S. GOLDSMITH, CRE, AND STEVEN G. MLENAK

TAKE A MOMENT TO THINK ABOUT THE WORLD IN 1987. Virtually every aspect of our daily life has changed in those three decades. At the time, mobile phones cost around $1,400 and were the size of a Dutch oven. The words "climate change" meant nothing. The average monthly rent was $395 and a dozen eggs could be yours for just $0.65. And then there's this humbling fact: the World Wide Web would not be invented for another two years.

Yet, for many individuals and businesses making the final payment on a 30-year mortgage or bond this year, 1987 was likely the year in which such debt was first secured, likely against a physical property, be it a home, office building or other facility, showing its wrinkles as compared to more modern, technically-up-to-date facilities. Developers and governing bodies throughout the country seeking to construct and/or finance certain facilities are now being forced to consider the shelf-life of such properties like never before.

For certain types of facilities, such as structured parking garages, many experts are predicting a rapidly diminishing overall demand in the decades to come. Those looking to finance the construction of such facilities would thus be best counseled to account for what many of these experts believe will be a seismic shift in the way people get around. Whether it be through conservative planning, by designing such facilities in a manner which allows for adaptive reuse, or by utilizing shorter term financing options, developers of structured parking facilities should be careful not to find themselves in a position where they are still making debt service payments on an empty, unused and, ultimately, non-adaptable facility.

For generations, the need for more and more parking has seemingly grown unabated. According to *The Economist*, parking accounts for as much as 24 percent of the area of American cities, and some

About the Authors

Robert S. Goldsmith, CRE, *is a partner at Greenbaum, Rowe, Smith & Davis LLP, located in Woodbridge, N.J., where he chairs the Redevelopment & Land Use Department. His practice focuses on redevelopment, downtown and urban revitalization, transit oriented development, project financing and incentives, sustainable building initiatives and public-private partnerships. Mr. Goldsmith's experience encompasses counseling clients on the specialized issues in redevelopment related to parking demand, design and construction.*

Steven G. Mlenak *is an associate at Greenbaum, Rowe, Smith & Davis LLP, located in Woodbridge, N.J., where he is a member of the Redevelopment & Land Use and Real Estate Departments. He concentrates a majority of his practice in the area of community association law, providing strategic guidance and general counseling to the firm's association clients across a broad range of legal issues. Mr. Mlenak also provides support and guidance to clients on a variety of land use matters, including site plan, subdivision and variance applications, and counsels both developers and municipalities on issues related to the redevelopment process.*

urban areas have as many as 3.5 parking spaces per car.[1] Still, those looking for parking spaces account for as much as 30 percent of miles driven in urban business districts.[2] Experts now believe, however, that we may be at the apex of that growth curve. Due to technological advances such as the proliferation of automated driverless vehicles, the growth of companies offering "shared" vehicle services such as Zipcar and Uber, and overall shifts in the value society places on owning cars and suburban living, parking demand is now beginning to decrease in many areas of the country.

Car-share companies such as Zipcar, car2go, Uber and Lyft, claim that for every shared vehicle on the

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road, 15 personally-owned vehicles are taken off of it.[3] A report prepared by the University of Berkeley's Transportation Sustainability Research Center backs that claim up, finding that around 20 percent of corporate Zipcar members reported that they sold a personally-owned car after joining the program.[4] Additionally, another 20 percent claim they avoided buying a car as a result of joining the service.[5] Overall, the study concluded that cost-sharing is on the rise due to a younger generation less keen on vehicle ownership and a growth in the corporate sector looking to enjoy the cost savings over maintaining a fleet of vehicles.[6] In Paris alone, it has been estimated that more than 20,000 private cars have already been taken off the road.[7] When you consider that personally-owned cars are parked as much as 95 percent of the time,[8] it only makes sense that such services will grow as more and more people look to shed unnecessary car payments, repair and upkeep costs and insurance premiums.

Another major factor to consider is the expected implementation and growth of driverless, autonomous vehicles. Companies such as Google, Apple, Ford, Volvo, General Motors and Tesla have all been working on self-driving technology for years and, by all accounts, we are closer to a driverless world than ever before. According to the Boston Consulting Group, fully automated cars could make up nearly 10 percent of global vehicle sales a year by 2035.

The Government thinks the time for self-driving vehicles is coming as well. In February 2016, the U.S. Department of Transportation included $4 billion in its proposed 2017 budget for the purpose of implementing driverless car pilot programs over the next decade.[9] Meanwhile, carmakers, technology companies and ride-sharing startups announced they were forming a coalition to lobby the federal government on the rules for self-driving cars.[10] The "Self-Driving Coalition for Safer Streets," composed thus far of Ford, Google, Uber, Lyft and Volvo, aims to advocate for the quick implementation of rules governing autonomous vehicles as the technology gets closer to being market-ready.[11] Part of their push is an argument that the proliferation of driverless vehicles which practice conservative driving techniques and obey all speed and traffic laws would greatly reduce the rising number of casualties caused each year with more and more drivers distracted by texting,

screaming kids in the backseat, applying makeup, etc. Driverless vehicles would also help reduce the number of intoxicated drivers on the road.

At first impression, it could appear that the advantage of such vehicles would be personal without an impact on overall vehicle ownership. But many experts believe such vehicles would cause a dramatic reduction in the number of cars needed in families. A driverless vehicle could drop Dad off at work in the morning, drive back to pick up Mom and drive her to work, pick up the kids after school and then pick both parents up at the end of the day. During its nonuse, the car could park further away without needing to use closer, for-fee, options. Finally, the driverless technology will make traffic flow more smoothly because of the elimination of erratic braking, the ability to re-route to avoid congestion, and the ability for vehicles to travel closer together to increase road capacity.[12] With cars in constant use, and the reduction of vehicles per family, much less parking space would be needed.

Aside from technology, society is slowly shifting its values away from vehicle ownership and suburban or rural lifestyles. In 1983, more than 91 percent of 20- to 24-year-olds held a driver's license. By 2014, that number had dropped to approximately 77 percent and shows little sign of recovering.[13] At the same time, cities are growing faster than the country as a whole. The Pew Research Center found that 48 percent of Americans would choose walkable urban areas instead of suburbs.[14] Notably, more people used public transportation in 2014 than in any year in six decades.[15] Still, some believe that the proliferation of driverless cars will mean many people moving further away from work since they are now able to be productive during their commute since they do not need to be behind the wheel.[16]

It is for these reasons that there have been calls on developers to strategically design new parking structures. *Washington Post* columnist Carlo Ratti believes that "designers, tasked with creating garages, should take as a challenge to introduce flexibility and acknowledge the full life cycle and potential transitions for these structures."[17] Architects and designers are more frequently being asked to design urban parking garages with the 'good bones' necessary to allow them to be re-purposed in the future to other uses. "As the auto culture wanes we're

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going to have a lot of demolition to do, which is unfortunate," according to Tom Fisher, dean of the College of Design at the University of Minnesota. "If we're going to build these [garages] let's design them in a way that they can have alternative uses in the future. With just a few tweaks that's really possible." The biggest design change that will yield the greatest flexibility, yet be the most costly, would be a do-away with sloped garages. Exterior spiral ramps or elevator lifts, for example, would surely enable developers to re-purpose the facility with the greatest flexibility in the future, however the cost in doing away with the tried-and-true sloped ramps which serve both as the means of traversing the different parking levels but also as additional surface area for parking will surely prove uneconomical for many projects.

There is no question amongst experts that the demand on parking is going to decline. What cannot be predicted is how slowly or rapidly that decline occurs. It is impossible to determine the parking demands of a society thirty years out. With conservative planning and prudent engineering, however, parking facility developers can avoid making the last debt service payment in 2045 on an empty parking facility. ∎

ENDNOTES

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