What are the benefits of hiring a parking consultant?
This article answers this question.

But first, we should consider the question, WHAT IS a parking consultant?

Parking consultants provide professional services in the areas of parking planning, parking studies, parking structure design, parking operations consulting, parking facility maintenance and parking structure restoration. Parking consultants have collaborated and participated in the Parking Consultants Council (PCC) since 1972, a special professional group within the National Parking Association (NPA). The PCC defines a parking consultant as an individual working in private practice for a fee having substantial experience and a demonstrated high level of skill and professional competence. To be a PCC member, individuals must first be sponsored by a current PCC member, more than half the individuals’ work in the past five years must be in parking consulting and they must be active participants in the PCC.

The PCC defines the areas of Parking Consulting specialty expertise as:
- Parking Planning, Surveys and Studies
- Parking Economic Analysis
- Functional Design
- Environmental Impact Statements and Studies
- Architectural and/or Engineering Services
- Parking Revenue Control
- Signage and Graphics
- Design and Construction of Parking Facilities
- Research Activities for the Betterment of the Parking Industry
- Expert Witness Services
- Traffic Studies
With that background information, now we can answer the initial question of “What are the benefits of hiring a parking consultant?” by demonstrating the many benefits parking consultants provide to their clients.

Parking facilities are unique buildings, unlike any others in many respects. They are typically unenclosed, making them vulnerable to harsh environmental conditions such as freezing weather, wide temperature fluctuation, rain, snow, sun, and deicer chemicals necessitating special design and maintenance considerations. Cars are driven through the structure so the floors must have sloping ramps and accommodate turning clearances, vehicle bumper impact loads, and the weight of the vehicles. Many people are uncomfortable in parking structures because of their reputation for being unattractive, confusing, inconvenient and unsafe. Thus, today they must be designed to overcome this reputation while providing fee collection and revenue control requirements. Parking consultants have expertise in all of these areas and can provide value and benefit to parking structure developers and owners throughout the entire life of a parking facility or system.

As shown in the Figure 1, the lifecycle of a parking facility can be viewed as a continuum. Parking consultants provide significant contributions during all five phases of the continuum.

**Planning & Studies**

Parking master planning, supply/demand studies, site assessment and selection, financial analysis, and parking facility programming are accomplished during the first phase of the parking continuum. Parking planning is a crucial function of any campus, medical center, airport, downtown or commercial development. Enough parking must be provided to meet local ordinances and satisfy the demand to assure viability. However, parking consultants can also help prevent “overbuilding,” when too much parking is provided. Overbuilding wastes valuable resources and results in larger parking lots or structures than necessary. Providing even a few too many spaces can exceed the cost of investing in a parking consultant to help identify the appropriate amount of parking that is needed.

Parking owners and users all want parking to be convenient, plentiful and inexpensive. However, there is a parking axiom common in the business: owners can typically attain two of the three simultaneously but not all three at once, as shown in the diagram in Figure 2. For instance, you can have enough inexpensive parking but it will not be convenient. Or, if you have enough convenient parking, it probably won’t be inexpensive. And lastly, if parking is convenient and inexpensive, most likely there isn’t enough. Parking consultants can help plan and implement parking solutions that achieve the best balance of these desires.

Another significant benefit of using a parking consultant during the planning
phase is in the appropriate siting of the parking facility. Benefits include ensuring that appropriate walking distances, line of sight, pedestrian/vehicular interfaces, traffic capacity, and other urban design characteristics are integrated into the design (Site Selection Study). Another important dimension is the definition of an appropriate parking facility footprint. This can have dramatic impacts on the ultimate design efficiency (square feet per car) and can potentially generate hundreds of thousands of dollars in project cost savings compared to an inefficient design. The savings from this item alone may be many times the parking consultant’s fee.

Evaluating operational and programming issues early in the planning of a project can improve operational flexibility and allow more effective use of newer parking technologies. For example, designing a facility for the ready acceptance of central cashiering or pay-on-foot operations can save thousands of dollars per year in recurring operating costs. Another example would be the grouping of exterior bay and roof-top light fixtures onto a separate circuit so that those lights can be placed on photocells and not used during the daytime. A 25-35 percent reduction in utility costs per year may be possible in above-grade parking facilities.

**Parking Structure Design**

There is an art to parking structure design that goes beyond the basics of architectural and structural considerations. By understanding the usage of the building and the characteristics of the parkers who will use it, parking consultants incorporate the elements and amenities suitable for each project: adequate headroom clearance, appropriate quantity and location of stairs and elevators, proper ramp slopes, sufficient lighting levels, suitable turning radii and parking space sizes, and enough entry and exit lanes, for instance. Furthermore, parking consultants’ knowledge of parking planning and design means that many potential negative aspects of parking structures can be minimized or eliminated, such as pedestrian-vehicle conflicts, hiding places for wrongdoers, inadequate wayfinding, dark closed-in spaces, and poor visibility. This understanding of the art of parking planning and design is only available from a

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parking consultant who regularly specializes in the planning and design of parking facilities.

The decision to hire a parking consultant is much like the decision to hire a plumber rather than a general handyman to fix a plumbing challenge. Hiring the experienced expert, who utilizes the special tools of the trade, saves time and helps ensure things are done right compared to hiring a generalist who may work on a parking project only occasionally among all the other types of projects they do. Specialists apply the lessons learned from previous projects on their new work, helping prevent the client from becoming the “beta” test or prototype.

Parking consultants are focused on the parking market so they are well aware of the latest trends and innovative ideas in the field and know how to properly apply them long before the generalist architect or engineer even knows about them. Parking consultants are familiar with the problem areas of parking structure construction and thus can anticipate them, avoid them before they occur, or apply appropriate solutions when problems unavoidably do occur.

Some of the unique aspects of parking structure design that are routine considerations for parking consultants include:

**User Characteristics** — Parking structures should be designed to accommodate the needs and characteristics of the specific users. Whether they are a short-term or long-term parker, employee or visitor, or whether the parking is for a hospital, university, airport, residential, office or downtown, each has unique characteristics that will impact the design.

**Security** — Designing a parking structure that feels safe and promotes passive and active security is a primary determinant in creating a comfortable facility that parkers are eager to use.

**Lighting** — The lighting of the parking facility is one of the most important factors to help assure a safe and secure environment. Parking structures have special lighting design standards recommended by the Illuminating Engineering Society of North America (IES). Adequate illumination must be provided to ensure safe passage of pedestrians and vehicles, for users to feel safe and secure, and to be a deterrent for wrongdoing. Energy consumption for the lighting is one of the highest operating costs for parking structures. Parking consultants will help make sure that the lighting is sufficient to accomplish the goals described above, but will also recommend strategies for reducing energy consumption and cost.

**Barrier-Free Accommodations** — Parking consultants are very familiar with the Americans with Disabilities Act and Building Code provisions for barrier-free
Spaces Available

Level 6  CL5d
Level 5  I15S
Level 4  638
Level 3  450
Level 2  59
Level 1  FULL

Variable Message Sign.

cashier booths, gates, pay-on-foot devices, etc. for off-street parking facilities and meters, multiple space meters or pay-and-display devices for on-street parking spaces are getting more and more specialized and complex. Parking consultants have expertise in properly applying these systems and specifying their installation. Also, helping owners protect their parking revenue from fraud and theft through the use of the parking equipment, proper operating procedures, and audit services are key benefits that parking consultants offer.

Applying Advanced Technologies and Current Trends — Because parking consultants specialize in parking, they are aware of newer equipment and advanced technologies long before non-specialist architects and engineers. Also, parking consultants are prepared to apply these new ideas in parking planning and design well before others are even aware of them. Some technologies that parking consultants can apply to parking projects include Automatic Vehicle Identification (AVI), Pay-On-Foot, License Plate Recognition, Credit Card Payment, Smart Cards, Cellular Phone Payment Options, Computer Controlled Variable Message Signs, Space Guidance Systems, Solar Panels, or even completely Automated Parking Structures.

Graphics — Signage and wayfinding graphics that help guide users through the parking structure to an available space, to their ultimate destination, back to retrieve their vehicle, and quickly out of the facility significantly enhance the value of the prop-
erty as well as enhance the customers’ experience. Inadequate signage can result in patrons literally becoming “lost” in a parking structure in their attempts to find their way through it.

**Architectural Emphasis** — Today, parking structures are no longer utilitarian storage buildings, but important architectural amenities that must be integrated into the surrounding environment. Parking consultants are experienced in creatively applying various materials such as precast concrete, brick masonry, stone, metal railings, grills and ornamentation, and glass to craft attractive parking structures. Rather than viewing a parking structure as a place to warehouse vehicles, we prefer to view the structure as the transition point between the vehicular and pedestrian experience. This shift of perspective brings with it a rethinking of the parking environment. The parking structure becomes an extension of the facilities it serves. The parking experience truly does create the first and last impression patrons have of your campus, downtown, etc. We see the trend toward enhanced parking environments as one that will continue.

**Sustainable Design** — Many parking consultants have experience in sustainable structures and green construction. Reducing environmental impacts by minimizing the size of parking facilities as discussed in the Planning & Studies section above is very important, as is proper handling of storm water collection and disposal. The use of recycled and reused materials is also important. Recycled materials may include steel and crushed concrete while reused materials include replacing environmentally damaging cement with fly ash, silica fume, or slag. Use of local materials and design for energy efficiency will also contribute to a “greener” project. Another green
approach to parking construction is to use water-based products or materials with low volatile organic compounds (VOCs) when specifying deck coating and concrete sealers. While a parking structure cannot be certified using the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) Rating System, it can help attain points toward LEED certification for a mixed-use development.

Ramping Configuration — One of the more challenging aspects of parking design is determining the best vehicular circulation and floor ramping system to suit a particular site and user group. Considerations such as the use of one-way verses two-way traffic, single helix verses double helix ramping, user comfort factors or level of service, and appropriate parking geometrics are crucial to a successful project.

Efficient Parking Space Layout — Parking consultants bring considerable value to parking projects by the efficient layout of parking to help provide smooth traffic flow, ease in finding available parking, and economic construction. The parking efficiency, measured in square feet per parking space, is the key measure of the effective utilization of space and resources in the design of parking structures. There is an art to providing the right balance of efficiency and function to meet the user and owner objectives.

The better the efficiency (lower square feet per space), the lower the cost per space, but also the tighter the parking space widths, drive aisles, and turning radii. Parking consultants have the experience and expertise to apply quantitative parameters based on user types to the design of the facility to achieve the lowest possible efficiency and cost, while providing sufficient user comfort. Again, the efficiency in the parking layout gained by a parking consultant may result in construction cost savings that are many times more than the costs of including the parking consultant as part of the design team! For example, the cost savings for a 1,000-space parking structure designed to achieve 310 rather than 335 square feet per space could be more than $1,000,000.

There are so many benefits to hiring a parking consultant that they simply could not be contained in one article. Next month in PARKING look for the concluding Part II of this article. 

**Gary Cudney is the president and CEO of Carl Walker, Inc., a leading parking consulting firm. Gary has 22 years of experience as a parking consultant and is a member of the NPA Parking Consultants Council. He can be reached at gcudney@carlwalker.com.**

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The PCC is instrumental in advancing NPA’s mission—to solve parking difficulties, promote parking research and publications and enhance the image, public acceptance, and economic progress of the parking industry. The PCC offers many publications that can be purchased from the NPA Web site www.npapark.org, including:

- The Dimensions of Parking
- Parking Garage Maintenance Manual
- Guidelines for Parking Geometrics
- Guide to the Design & Operation of Automated Parking Facilities
- Security Design for a Parking Facility
- Planning Guidelines for Intermodal Parking
- Recommended Zoning Ordinance Provisions for Parking Guidelines for Parking Studies