

By Joey D. Rowland, PE and
Thomas Carlson-Reddig, AIA, LEED AP

WHAT
HAS
YOUR
PARKING
DECK
DONE
FOR YOU
LATELY?



**A New
Approach to
Campus
Parking.**



Parking decks were once considered necessary evils and relegated to secondary status in the minds of campus planners. While much attention was lavished on academic buildings and student unions, parking was shoved onto the outskirts of campus on undesired plots of land. Not anymore—campus planners now recognize the importance of parking in the master planning process.

College and university planners understand that the college campus is a dynamic and constantly changing environment. In the past, surface parking lots often accompanied academic buildings, creating sprawl and diminishing the overall collegiate experience. To address these problems, new buildings and green space began to replace parking lots, creating additional parking demand and a supply shortage. Parking structures came to the rescue by creating ample parking in a reasonable walking distance to the campus core. The problem with these early parking structures was that they were generally utilitarian, and little or no attention was paid to aesthetics or user concerns.

Fortunately, that's no longer the case. College and university planners realize that parking decks can be integrated into the campus fabric, both aesthetically and functionally. Thanks to consultation between planners, architects, and parking designers, structures feature aesthetic treatments that create a gateway to the campus, feature details necessary for convenient parking

and a good first impression, and use ground level space in the garage for user amenities such as coffee shops or newsstands. Transforming the parking structure from basic storage of vehicles to an active campus building has turned a necessary investment into a valuable asset.

Planning for Parking

We have noted a new approach in college and university planning in recent years. Parking structures are more often seen as an integral feature of in the planning and design of new campus buildings. Sector studies are often undertaken to properly plan for new academic buildings, parking facilities, green space, and pedestrian elements within a certain area of campus. These studies reveal the importance of building and parking deck placement and the interrelated effects on pedestrian movement and traffic patterns. These studies often have a positive influence on the success of a new development. One example is the University of North Carolina (UNC) at Charlotte.

Sector Planning at UNC Charlotte

UNC Charlotte has expanded greatly during the last 20 years and continues to grow at a rapid pace. In addition to having an overall master plan, the university has invested in sector plans that are more specific to particular areas. These plans study the relationships of existing and planned buildings in an area targeted for development. In addition to determining the best location for new academic buildings, these plans address traffic and roadways, parking facilities, pedestrian movements, and utility requirements. They are helpful in identifying costs and they carefully consider site issues as well as the overall goals and challenges of the campus.

A parking structure will most often be the largest building footprint in these distinct precincts, so its size, location, and scale are more thoroughly evaluated. One particularly successful sector plan was conducted for the immediate area around a new student union. Through this careful study, the 1,000-space parking deck was located to serve the student union effectively while preserving valuable land for a future recreation center and academic building. As UNC Charlotte Director of Campus Planning Peter Franz observed, "Setting the parking structure back a sufficient distance allowed flexibility for these future buildings, which were unknown at the time." Without a sector study, it is likely the parking deck would have been more proximate to the student union, forcing those future buildings elsewhere.

Successful sector planning at the student union complex led to similar studies on other areas of campus. The north area sector study had to consider the effects of a future light rail stop on that part of campus. A sector plan for the Charlotte Research Institute, the technology and research area of campus, needed to consider a very large parking deck as it relates to new research buildings, a new football stadium, and a future conference center. The South Village sector plan was a complex study involving a new residence hall, dining facility, loop road, and green space for student activity along with a large parking structure that serves the area. In each of these sector plans, planning for parking played an important role in the process.

Planning for Scale

College and university parking decks are often quite large and can overwhelm a campus development if not carefully considered. There are ways to alleviate these problems through architectural treatment, but consideration of location and overall massing are critical. It is vitally important to consider the scale of nearby campus buildings when first evaluating the type of structure. Consideration of scale and proper context will help determine the number of levels and parking bays and, ultimately, the building size and appropriate location. Landscaping can also play a role in visually diminishing the mass of a parking structure.

Careful consideration of major vertical circulation elements can help address the scale of parking decks as well. Locating the stair and elevator core on the most public face not only brings people closer to their destinations, but helps create a more pedestrian scale. Parking decks are by



The UNC Charlotte Student Union Parking Deck was designed to be flexible and accommodate present and future campus development.

nature utilitarian and can be repetitive looking, but stairs and elevator cores can be designed to bring an element of delight to the building and enhance the overall campus environment.

Planning for Non-Parking Functions

When properly planned, special uses can be integrated into the lower levels of parking decks. Bookstores, coffee shops, office space, or other uses can be incorporated quite easily, helping animate the building and bringing activity to the facilities. Integration of these smaller program areas can help address programmatic needs of college and university campuses while contributing to the deck aesthetics, helping it appear more integrated with the overall campus environment. Care should be taken, however, not to overdo it. Parking decks should be for the efficient storage of vehicles and a positive experience for the user. Too much space allocated for complex non-parking uses can have a negative effect on the functionality of the parking garage and can render the project not as successful as envisioned.

Architectural Treatment

One of most significant advances in modern parking deck design is the architectural treatment. In the past, parking structures were unabashedly straightforward in their appearance and were not shy about expressing their use and identity. A parking deck looked like a parking deck! While there still are many utilitarian parking structures, many are becoming so elaborate that they might not be easily identified as parking structures from the outside. Long horizontal openings are giving way to smaller punched openings that are more like those on academic buildings. Cornices and entablatures are being integrated into the facades to cap the parking decks and relate to the campus fabric. Rather than taking the modernist attitude of expressing a building primarily for what it is, architects are thinking more about the whole of the campus. This approach is echoed by Peter Franz: "Design that seeks to have the deck appear similar to a typical campus building while still having certain elements that identify it as a parking structure are important considerations."

Use of Materials

As parking structures become more architecturally integrated into campuses, it is important that they share the same material palette of the campus buildings. Glass, brick, stone, and a plethora of metals have been introduced to parking decks to not only improve their overall aesthetics, but to better blend with the architectural campus fabric. Virtually anything is possible as long as the open air requirements for ventilation are not compromised. The integration of thin-set brick into precast concrete walls and spandrels has become more common, reducing the cost and time associated with hand-laid brick, stone, or other labor-intensive

materials. Metalwork and glazing can be used in many ways, providing more than aesthetic appeal. Perforated metal can be used to provide shade and screen cars while still allowing free air flow. Green screens can be used for planting materials as a sustainable feature as well as an architectural element. On the top levels of parking decks (where no one likes to park), shade structures can be incorporated to entice better use. Solar panels can be placed on top of the shade structures, creating a source of energy for lighting or other garage functions.

User-Friendly Design

Perhaps the most overlooked but important element of parking deck design is the consideration of the human element. Traditionally, parking garages were designed to get the largest number of spaces for the lowest cost. That usually meant tighter parking geometrics, less maneuverability, lower quality lighting, confined stairs, etc. The predictable result was dissatisfaction with the facility and underuse. When the attitude about parking is one of a valued asset, acceptance and satisfaction from the user is of paramount importance. Enhanced architectural treatment, good lighting, comfortable turns, open stairs, and glass-backed elevators become not only good design practice, but institutional requirements.

Paying close attention to the design of vehicular signage and graphics can also enhance the user experience. A common complaint is a lack of clarity on where to go once inside the deck. A clearly laid out parking deck complimented by thoughtful, well integrated graphics can help diminish confusion, enhance delight, and further promote the brand and identity of the institution.

Once parked, the pedestrian experience is an important design element. Patterns of pedestrian and vehicular movement are being more carefully investigated and designed, improving the user experience inside the parking deck and to and from the campus. For many, the parking deck can be the first and last experience that one can have on a campus and it is essential that experience be a positive one. It must be safe, feel clearly connected, and ideally be a richer experience, through landscape, lighting, signage, or other important amenities.

A near universal problem in colleges and universities is the consideration of parking. As campuses become more dense, the need for structured parking has created new challenges for campus planners and architects. With good planning, parking decks can be designed to fit in well with academic buildings and can be a positive experience for the user. Everyone appreciates convenient and close-in parking. With the guiding principal that a parking deck is an asset and not a liability, the question of "What has your parking deck done for you lately?" can be answered with the resounding response, "A lot!"



JOEY D. ROWLAND, PE, is vice president and southeast regional manager for Carl Walker, Inc. He can be reached at JRowland@carlwalker.com or 704.527.0343.



THOMAS CARLSON-REDDIG, AIA, LEED AP, is a studio principal with Little Diversified Architectural Consultants. He can be reached at tcarlson-reddig@littleonline.com or 704.561.8700.