

Transformative Restoration: From Eyesore to Talk of the Town in Lexington, Ky.

Summary

The question of whether to demolish or repair the badly deteriorating, 40-year-old Helix Parking Structure, located between two government buildings in Lexington, Ky., ultimately led to a \$4 million renovation project that incorporated significant structural and waterproofing repairs, lighting upgrades, signage enhancement, exterior revitalization, and numerous other sustainability features. Drivers easily navigate to spaces via a PARCS (Parking Access and Revenue Control System) that offers real-time space availability information on LED counters outside garage entrances; what used to be a single-exit choke point was resolved by the creation of three cashier-free lanes. New signs and graphics significantly enhance the user experience. Outside, waterproofing coatings, a stainless-steel panel system, and programmable LED lights transformed the historic garage into a dynamic element of the downtown fabric. Energy-efficient fluorescent lighting with daylight and motion sensors improve visibility and yield a 50 percent energy savings. ADA spaces were incorporated into a new layout, which is safer and more user-friendly. Operational upgrades have included 24/7 operations, resulting in a revenue increase and more reliable customer service.

Issues addressed/problems solved:

- Structural concrete repairs.
- Waterproofing measures.
- Corrosive inhibitors to reinforcing steel.

Project goals:

- To structurally restore the facility, creating a safe and inviting environment.
- To extend the viable life cycle of the facility, renewing its importance to the community.
- To modernize the facility, making it user friendly as well as a public art showcase for downtown Lexington.

Approximate cost or budget:

- \$4 million

Metrics used to track project's progress:

- Project phasing diagrams, weekly progress meetings with the contractor and consulting engineer, and concrete testing by an independent testing facility ensured that the project met intended goals and agreed-upon timeline.

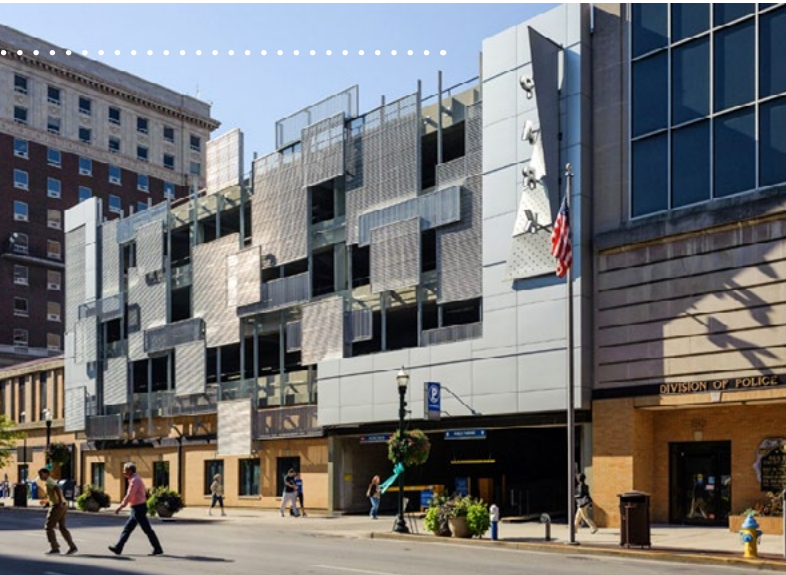


Stainless-steel façade panels and programmable LED lighting made the award-winning Helix Parking Structure a public art destination.

- The complete closure of the facility during the project allowed the contractor full access, which through the contractual agreement with the Lexington and Fayette County Parking Authority (LPA) provided a \$50,000 price deduction on the final contractor invoice cost. This contractual clause also shortened the length of the project by eight weeks, allowing for an earlier reopening of the facility and recoup of revenue loss. As executed, the project extended the life of the facility by 18 to 20 years and reaffirmed its role as an integral part of the downtown urban fabric.

Challenges/obstacles overcome:

A significant challenge was the need to relocate all monthly and transient parkers for the duration of the project. As the busiest garage in downtown Lexington, the closure of the facility was not to be taken lightly.



Relocating all monthly and transient parkers at the busiest garage in downtown Lexington was a challenge.

Sustainability investment/features:

Sustainable elements were achieved through the PARCS equipment which utilized a chip coin system and active available space-tracking signage mounted outside the garage. The elimination of paper tickets, ticket jams, and the resulting traffic-flow problems created a more visitor-friendly environment, reducing emissions from cars circling blocks in search of spaces. The PARCS equipment also powers down when not in use, saving energy. Occupancy and daylight sensors installed on the lighting system and energy-efficient LED lighting in the architectural façade enhancements maximized energy saving.

Innovative/creative solutions or processes developed that may help others in the industry:

- Replacement of the helix ramp. While the concrete slab comprising the drive surface had deteriorated greatly and was supplemented by an array of steel shoring, the concrete columns supporting the ramp were sound and were left intact.
- The slab comprising the drive surface was replaced with new reinforcing steel and concrete. The existing ramp slab of the ramp was removed and a new slab was poured, one section at a time.
- The ramp retained as much as many original structural components as possible, minimizing demolition debris to be hauled to a landfill; this extended the life of the ramp 18 to 20 years.

Additional information:

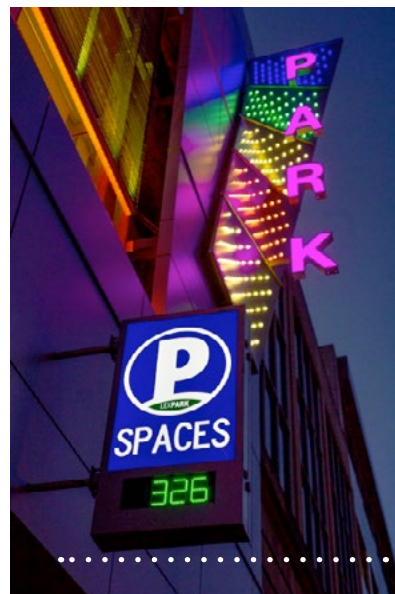
- The finished project has been warmly received by residents of and visitors to Lexington. Its stainless-steel façade panels and programmable LED lighting have made the garage a public art destination and a regular feature on social media.
- The widely acclaimed project received the 2014 Downtown Lexington Corporation Landscape and Streetscape Award, the 2015 International Parking Institute Award of Excellence, and the 2015 International Concrete Repair Institute Award of Merit.

Project team:

- Jason Clemens, Project Manager, RAM Construction, Lavonia, Mich.
- Edward Trammell, Planning and Project Manager,
- Walter P Moore, Structural Engineer of Record

Project stakeholders:

- Lexington & Fayette County Parking Authority
- Lexington Fayette Urban County Government
- Lexington Fire Department
- Lexington Police Department
- Fayette County Clerk
- Kentucky State Police Department
- Kentucky State Division of Driver Licensing
- Kentucky Human Rights Commission
- Residents of Lexington, Ky.



**Among results:
Exiting is three times faster and facility life was extended about 20 years**