Middlesex Hospital, Parking Garage
Condition Assessment and Rehabilitation
Middletown, Connecticut

Named one of the top U.S. hospitals by the “Thomson Reuters 100 Top Hospitals: National Benchmarks for Success” study, Middlesex is the only Connecticut hospital to be recognized as such. For this busy facility, parking is at a premium. That’s why, when the hospital’s facility management observed age-related defects at its four-story, 108,000sf precast parking garage, they asked Hoffmann Architects to assess the situation and recommend a solution.

Beginning with visual analysis of the structure, Hoffmann Architects’ design professionals conducted materials sampling and analysis and detailed the extent, location, probable causes, and recommended remedial action for observed defects. Because deterioration at the 35-year-old garage was advanced, Hoffmann Architects recommended weighing the costs of large-scale rehabilitation with long-term use goals for the structure. To this end, our design professionals suggested three repair options, ranging from isolated defect treatment to complete replacement.

At the request of the hospital, Hoffmann Architects conducted a feasibility study, in partnership with Anchor Engineering and Manafort Brothers Inc., for construction of a new garage on the Middlesex Hospital campus. Hoffmann Architects’ study included analysis of environmental, historical, topographical, circulation, and constructability issues, as well as conceptual layouts and construction cost estimates.

Ultimately, the hospital elected to undertake extensive rehabilitation of the existing structure. Built over a brook, the garage posed difficult site conditions. Hoffmann Architects developed a rehabilitation strategy that both accommodated this design challenge and addressed underlying causes of distress. Rehabilitation involved replacement of concrete toppings; repair of cracked and spalled concrete; sealant joint replacement; repair of damaged structural connections; drainage improvements; surface treatment application; replacement of guardrails, staircases, and stairwell doors; rehabilitation and waterproofing of sidewalks and elevated walkways; and repainting. Work was distributed over four phases in seventeen months, so as to maintain continuous usage of the high-traffic parking facility.