



A Chapter of the  
Precast/Prestressed Concrete Institute

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## Project Profile

# 9800 Medical Center Drive Parking Structure

### **Design-Assist: Creating the Conditions for Project Success**

The design-assist approach to construction offers numerous benefits for both owner and general contractor, including real-time costing and total value analysis; constructability analysis and review; collaborative design; and reduced delivery time. In an ideal design-assist scenario, the owner and/or owner's rep is actively engaged in the decision-making process, the team maintains open communication through consistent in-person meetings, and key milestones in the design process are met in a timely manner that enables the construction schedule to flow with minimal delays. The result of this ideal collaboration is a project that meets the financial, aesthetic, and functional needs of the owner and is completed within the desired schedule and budget.

For 20 years, Shockey Precast has advocated the benefits of design-assist for precast structures. Our early engagement in the design process has enabled us to assist project teams in developing successful precast solutions. And while the design-assist approach has the potential to save time and

## AT-A-GLANCE

**Location:** Rockville, MD

**Owner:** Alexandria Real Estate Equities

**Owner's Rep:** Verity Commercial

**Architect:** Gaudreau

**General Contractor:** The Whiting-Turner Contracting Company

**Engineer:** Kimley-Horn

**Precaster:** Shockey Precast,  
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*continued from page 1*

budget for the general contractor and owner, the efficiency of the approach all depends upon the engagement, collaboration, and effectiveness of the project team to drive the design forward. The 9800 Medical Center Drive parking structure project in Rockville, Maryland is a classic example of an ideal scenario of factors coming together to create a successful design-assist project.

#### PROJECT SCOPE:

**Size:** 189,481 SF of double tees

**Precast Erection Start:** October 22, 2018

**Precast Erection Completion:** January 10, 2019

**Cubic Yards:** 5,630 CY

**Precast Components:** 510 pieces

Owned by Alexandria Real Estate Equities, the structure was originally envisioned as Cast-In-Place concrete. Shockey Precast proposed a precast conversion in spring 2017 and was selected by The Whiting-Turner Contracting Company to be the precast design-assist partner based on Shockey's extensive design-assist experience and long-time relationship with Whiting-Turner. Shockey Precast's in-house Engineering and Estimating

resources also contributed to the project award.

From the beginning, the owner and its representative, Verity Commercial, were actively involved in design meetings and Verity Commercial was empowered to make decisions for the owner. This level of engagement enabled the project design to progress forward without significant delays.

Experience plays a key role in design-assist, and the 9800 MCD parking structure project team brought extensive design-assist experience to the table. The team's understanding of design-assist and the collaboration necessary to ensure a smooth flow from design to construction helped keep the project on track, even with challenges such as the structure's architectural façade. The six-level parking deck features 190,000 SF of precast double tees, architectural columns and spandrels, with the north elevation and stair tower featuring a thin-brick façade that matches the adjacent office building. Designed to blend with the surrounding architecture, this thin-brick façade was challenging because of the shapes and sizes required to achieve the architectural concepts. Additionally, the exterior covering of the stair tower is glass framing, which meant less precast could be captured in the stability of the stair tower. The architect's design featured brick inside



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*continued from page 2*

the glass stair tower, and it was the use of precast that enabled this vision to be achieved.

Weekly design meetings were attended by all members of the project team, which meant challenges could be addressed and resolved in a timely manner without negatively impacting the overall project schedule. Shockey Precast manufactured the precast in two phases: the structural in the spring of 2018 and the architectural precast in the fall of 2018. Precast erection began on October 22, 2018 and was completed on January 10, 2019.

In today's construction market, time is short, funding resources are limited or phased, and speed is essential to a successful project. Many projects do not have the luxury of a process that includes lengthy design to 100% construction documents, bid/build/delivery and value engineering to meet budgets. Owners are seeking ways to streamline design and to expedite the front end of the construction process to bring their projects to market faster and more efficiently than ever before. Design-assist done right shortens the overall project timeline, reduces budget costs, provides best of best total value, and addresses potential design challenges before they become construction issues. As illustrated by the 9800 MCD parking structure project, the design-assist process is most effective with an actively engaged owner, open communication among team members, and a consistent meeting schedule to direct the project's progress.



### **Shockey Precast, a Metromont Company**

is a manufacturer and provider of structural and architectural precast concrete located in Winchester, Virginia. A regional leader in parking structures, data centers, design-build, and wall panel projects for nearly 60 years, Shockey Precast has completed nearly 4,000 precast projects in the Mid-Atlantic region, including more than 400 parking structures and more than 5 million SF of data centers. A charter member of the Precast/Prestressed Concrete Institute, Shockey Precast is a PCI-Certified Plant and a PCI-Certified Erector. The company was acquired in February 2018 by Metromont Corporation, a precast manufacturer with headquarters in Greenville, South Carolina and now operates as a division of Metromont. For more information, visit [www.shockeyprecast.com](http://www.shockeyprecast.com) and [www.metromont.com](http://www.metromont.com).

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