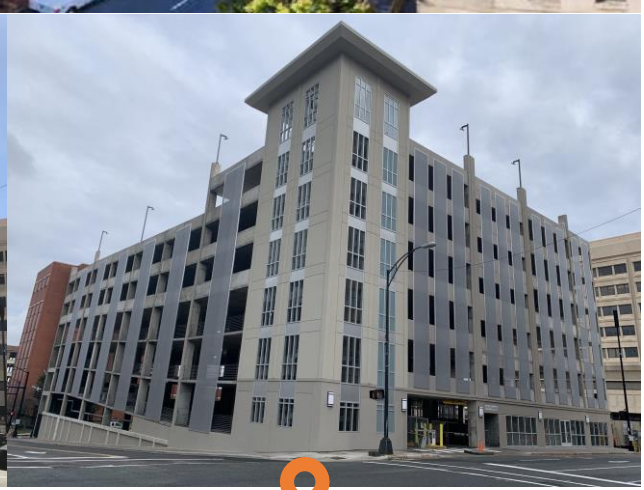
8 WEST THIRD PARKING GARAGE

KLINE ENGINEERING & CONSULTING



Project Description

Redevelopment of historic building into a Class A office building and adjacent parking garage.

- Cast in place concrete parking structure
- 7-story parking deck
- 550 parking spaces
- Approx. area: 175,000 sq. ft.

Design Features:

- Encapsulated unbonded PT concrete.
- Design of mat foundation. 14" thick foundation slab and 12" PT Mat.
- Concrete compressive strength for mat foundation of 5000PSI N.W.C.
- Design of 2 stair/elevator cores.
- Design of barrier cable and barrier wall system. Barrier cable ½" DIA. Placed at all exterior edges of slab and ramp from level 2 to 5.

Winston-Salem, NC.

CAPABILITIES

- **Structural Design**
- **Post-Tensioning**

Developer:
JDL Castle and Magnolia Partners

Architect:
CJMW Architecture

General Contractor:
Blum Construction

Project completion:
2019

Industry
Commercial

Project type:
REDEVELOPMENT
PARKING GARAGE

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Full Project Description

Located in the heart of historic downtown Winston-Salem, NC., this 8-story parking garage structure with nearly 570 spaces provides a convenient parking garage for the tenants of Winston Tower and the iconic and renovated 8 West Third, former Wachovia Bank constructed in 1911.

Kline Engineering & Consulting designed this cast in place concrete parking structure that has one (1) isolated private parking level below ground and 7-story connected public garage levels.

Our design incorporates a Post-Tensioned transfer mat foundation system used as an operative parking level and seven flat plate concrete decks above. Instead of conventional isolated shallow footings, our team opted for this PT transfer mat foundation system with steel driven piles placed only on one side of the building to eliminate the impact of overloading the soil near the adjacent building that had a 2-story underground foundation. By using this foundation system, Kline minimized the differential settlement across the building and eliminated the need for piles for the entire footprint. This out-of-box thinking saved the owner and construction team a significant amount of money and time.

To achieve economy and efficiency in the Post-Tensioned system, Kline used encapsulated unbonded Post-Tensioning.

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