

Cabarrus County Parking Deck

The Cabarrus County Parking Deck is comprised of a cast-in-place, post-tensioned concrete structure including a slab on grade, plus 4 elevated levels, 2 stair towers, 1 elevator tower, and structural steel canopy framing. The structure's foundation system consists of grade beams supported by deep foundations (auger cast piles).

PROJECT RESULTS

Kleinfelder was able to provide real-time analysis on post-tensioned concrete through on-site maturity testing while relaying time-sensitive tests results to the contractor using cloud technologies. These methods saved the client roughly \$5,000 in materials testing fees and reduced the contractor's wait time prior to starting stressing operations by several hours each day, equating to more than three weeks over the project duration.



A TIGHT DEADLINE

Kleinfelder was selected by the client to provide special inspections, construction materials testing services, and supplemental geotechnical services to help construct the new 5-story parking facility. The project needed to be completed within a tight deadline which required frequent coordination with the contractor and the use of time-saving methods of materials testing and reporting.

REAL-TIME TESTING AND REPORTING

Kleinfelder incorporated state-of-the-art concrete maturity testing equipment to determine real-time concrete strengths as related to post-tensioned concrete stressing procedures. The equipment transmitted data via web-based software with email alerts to the project team indicating when the next construction activity could occur. The real-time notifications enabled the contractor to maintain an accelerated construction schedule. Kleinfelder utilized field iPads to collect data and photo documentation of construction activities for detailed and accurate project records, which were uploaded daily for the team's reference.

Location:

Concord, North Carolina

Owner:

Cabarrus County,
North Carolina

