



CONSTRUCTION NEWS

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Gate Concrete Products Company, located in Oxford, NC, is helping shape the skyline in Virginia Beach, Va.

Gate Concrete Oxford teamed up with Armada Hoffer Construction of Chesapeake, Va. to create the tallest structure in the region. Virginia Beach Town Center, a new multi-phase development, will cover several blocks in the business district.

The first phase of the development consists of a mix of parking and retail and a 275,000-square-foot Class A office tower that stretches 22 stories tall.

In the early stages, Gate Concrete assisted CMSS Architects PC of Virginia Beach, Va. with the architectural precast concrete design requirements, to ensure the most efficient package was developed without compromising the design intent.

The facade of the buildings consists of thirteen different precast concrete mix designs. "This presented some unique challenges for our engineering, production and quality control departments," Chris Galde, Gate Concrete Marketing and Sales Director, said.

Each individual shop ticket had a mix number correlating it to the proper mix design. This eliminated any possibility of producing a piece with the incorrect mix design.

On the main body of the office tower, two different textures were created from the same concrete mix design. The aggregates were exposed or highlighted in different areas to simulate polished granite. A sandblast finish was also used for contrast.

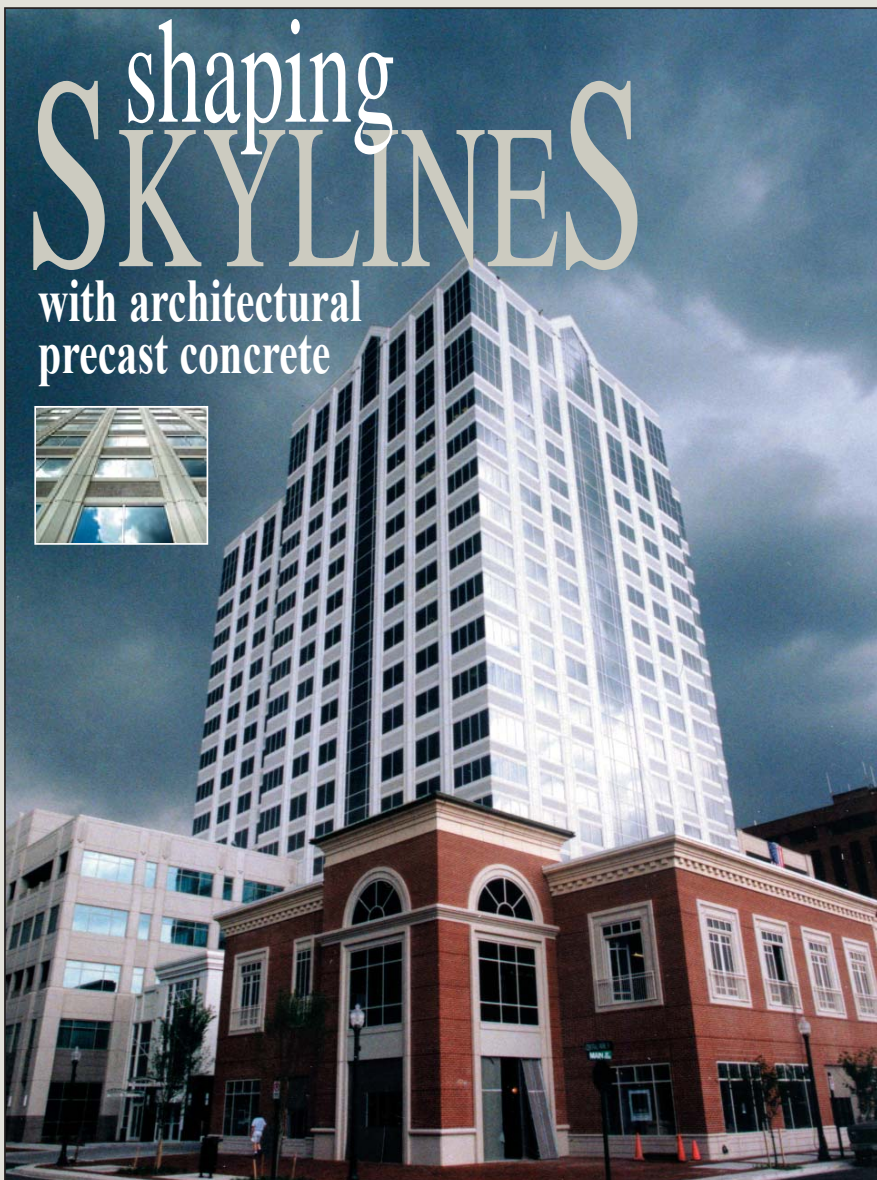
North and south retail areas are located at the base of the parking deck and office building. On the west elevation, a five-story office building is attached.

Gate Concrete produced 32,750 square feet of precast introducing ten separate mix designs and finishes on the retail and parking deck areas. This provided separation between the various areas on the lower levels.

On the main tower, the first nine floors are used for parking. The exterior of the office building and parking deck is clad with 1,324 pieces and 104,750 square feet of precast concrete panels. The tower was designed to carry the dead load of the precast spandrel and column cover panels with an outset perimeter structural beam line, thereby giving CMSS Architects the design flexibility they needed to locate columns and spandrel panels from the traditional column grid spacing.

To highlight the vertical features of the tower, precast column panels project 7" beyond the face of the precast spandrel panels.

Gate Concrete has the proven track record and ability to design and manufacture highly visible projects, whether a project has 200 pieces and one precast mix design or 2,000 pieces and 13 mix designs. Gate Concrete has the professional staff of engineers, detailers and craftsmen to meet and exceed the expectations of owners, architects, and general contractors.



shaping SKYLINEs with architectural precast concrete



THE TOWN CENTER OF VIRGINIA BEACH | ARMADA HOFFLER CONSTRUCTION | CMSS ARCHITECTS PC

This 22-story tower in the town center of Virginia Beach is now the tallest structure in the region.



West elevation: Five-story office building



North elevation: Retail on first floor and parking garage above

Full Potential of Precast

DEERWOOD NORTH 300, JACKSONVILLE, FL | THE HASKELL COMPANY | ROLLAND DELVALLE & BRADLEY

All-precast design provides key advantages over tilt-up construction

In an extremely competitive office market, developers of Deerwood North 300 in Jacksonville, Fla., took a close look at the bottom line before beginning construction on a new 4-story, 113,000 square foot, Class A office building.

Flagler Development Company, in Jacksonville, knew they had to build a more efficient building in order to remain competitive in the Jacksonville office market.

The two phases prior to Deerwood North 300 were clad with architectural precast concrete produced by Gate Precast Company in Monroeville, Ala. Flagler considered eliminating the perimeter structural steel and architectural precast on the third phase and using load bearing tilt-up wall panels, which would have been a considerable savings.

However, Flagler's main concern with changing the system was that the aesthetics of the building would be jeopardized.

A cost analysis showed that most of the extra expense was in the additional perimeter columns required to carry the load of the architectural precast concrete panels.

Gate Precast Company worked closely with Flagler and Leap Associates International to devise a system that eliminated the separate structural frames from the exterior walls.

"The load bearing architectural precast system allowed us to capture most of the cost savings usually attributed to tilt-up construction and gave us the assurance we would have the aesthetics we wanted," said Flagler Development Co. Design/

Construction Manager Kevin Fiscus.

Richard Jaramillo, LEAP project manager, was involved early with design consultants at Rolland DelValle & Bradley of Jacksonville concerning issues of details such as drafts, drips, reveals and panel sizes, which helped evolve the drawings to meet precast standards and mold building issues. There was also close collaboration between the general contractor, The Haskell Company, also of Jacksonville regarding the foundation's design.

"Two-story load bearing window punch wall units were engineered to become an integral part of the structure taking the vertical and horizontal floor and roof loads. This arrangement is economical not only from a structural design point of view but also in overall construction," said Dean Gwin, Gate V.P. of Marketing and Sales.

Precast's design flexibility offered the owner unlimited colors and textures, deep reveals, and custom-designed cornice work. Many of these elements would have been forfeited in choosing an alternative to precast.



Architectural precast panels were erected in nine weeks at Deerwood North 300.



Load bearing architectural precast units design benefits

- Speed of Construction
- Eliminates Trades
- Economical, Attractive Structure
- Elimination of Steel Results in Savings
- High Quality Facade in All Shapes, Colors and Textures
- Decreases Trade Overlap
- Reduces heating and cooling costs
- Design Flexibility
- Effective in renovation projects



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