

Technology Square, Georgia Institute of Technology

Atlanta, GA



Team

Owner:

Georgia Institute of Technology and the Georgia Tech Foundation, Atlanta, GA

Architect:

Thompson, Ventulett, Stainback & Associates, Atlanta, GA

Engineer:

Walter P. Moore, Atlanta, GA

General Contractor:

Holder/Hardin, a Joint Venture, Atlanta, GA

Total Project Cost:

\$140 million

Total Project Size:

617,000 sq ft

Technology Square, the \$140-million, five-building technology complex on the Georgia Tech campus in Atlanta's vibrant midtown business district, serves as a strong example of how cast-in-place reinforced concrete structures can meet the needs of high-tech buildings today while creating a sustainable future for tomorrow's students.

The five-building complex comprises the College of Management, the Global Learning Center, the Economic Development Institute, a hotel/conference center, and a parking structure. Four of the buildings feature cast-in-place reinforced concrete frames, including the College of Management, which received a Silver certification from the Leadership in Energy and Environmental Design (LEED) program developed by the U.S. Green Building Council. The parking structure features precast reinforced concrete components.

STRUCTURAL FRAMING SYSTEM

Reinforced concrete was chosen for the structures to enhance the building's sustainable-design attributes, such as its use of locally sourced materials. Reinforced concrete also helped keep the massive project cost effective by using the available local labor force.

The building's exteriors were designed to bridge the aesthetic gap between the "technologically infused environment" of Georgia Tech and the character and scale of the existing campus. To accomplish this, designers combined traditional architectural elements and materials such as reinforced concrete with modern, sleek, transparent components for major circulation nodes.

Precast reinforced concrete lintels, finished with a limestone appearance, serve as accents over window openings, providing a nod to the more traditional brick campus buildings that comprise most of the campus. Limestone-colored precast reinforced concrete also was used for large planar areas in the buildings, forming solid elements to contrast with the transparent glowing "lantern gateway" elements that serve as the complex's focal point.

REASONS FOR CHOOSING REINFORCED CONCRETE

Throughout the project, versatile reinforced concrete floor systems were used to meet each building's specific needs, owing to their shallow structural depths and minimal restrictions for core drilling. The College of Management, Global Learning Center, and Economic Development Institute all utilized modular pan-slab construction with post-tensioned beams. The hotel employed a flat-slab floor system with conventional reinforcement. The hotel was specifically designed for future expansion, with inserts cast into the slab and beams for later tie-ins to the structural framing system.

Precast reinforced concrete pavement was used extensively on street level sections to provide a pedestrian-friendly streetscape and courtyard.

Reinforced concrete was specified for all five structures to enhance their sustainable-design attributes and reduce overall costs.

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