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EXCLUSIVE EDITORIAL SPOTLIGHT ISSUE

# TRANSFORMING A NEIGHBORHOOD

CONNECTING GEORGIA TECH TO THE COMMUNITY BY ACHIEVING A SUSTAINABLE SITE

BY LIZ CHAPMAN

In 1998, when Georgia Tech President G. Wayne Clough envisioned reconnecting his university to Midtown Atlanta by crossing the Fifth Street bridge, the idea was nearly unthinkable. That section of Midtown was an underdeveloped, dilapidated neighborhood with a well-documented, decades-long crime problem. The neighborhood's once thriving business district economically collapsed in the 1960s and was only beginning to show the faintest signs of resurgence. For 50 years, Georgia Tech and Midtown had been divided by an interstate and a mindset, but that was about to change with the creation of a mixed-use development called Technology Square.

With an already established reputation as a leading technological and environmental research university and education institution, Georgia Tech seized an opportunity that was complemented by Technology Square's Midtown site: sustainable design. University officials decided early on to pursue Leadership in Energy and Environmental Design (LEED) certification for the complex's largest building, the Management Building, and hired Atlanta-based sustainable design and consulting firm The Epsten Group as LEED consultant to guide the project team towards that goal.

While credits were pursued and points awarded in all six LEED categories, Sustain-

able Sites was a resoundingly successful category for all of Technology Square. The project earned nine out of 14 possible LEED points in the Sustainable Sites category. Although the Management Building is the only LEED certified building in the Technology Square development, most of the strategies and technologies used to capture Sustainable Sites points were implemented throughout the large complex's site.

In the selection of the site alone, the project captured two LEED points: Site Selection and Urban Redevelopment. Prior to the development of Technology Square, this area of Midtown was little more than abandoned parking lots. The buildings that these lots once served had been demolished years earlier due to the area's depressed economy. Building on these vacant lots allowed Georgia Tech to help protect Atlanta's diminishing green space and take advantage of the site's existing infrastructure. The Management Building was a catalyst for further development in the area, with a development density of now more than 100,000 square foot per acre, while the LEED Urban Redevelopment credit only requires 60,000 square foot per acre.

The choice to create an urban infill redevelopment also provided ample opportunities for earning LEED Alternative Transportation points. Technology Square is

## GEORGIA TECH'S TECHNOLOGY SQUARE

**LOCATION:** ATLANTA, GA.

**LEED RATING:** SILVER

**SUSTAINABLE ATTRIBUTES:** TREE TRANSPLANTATION, NEARBY PUBLIC TRANSPORTATION, BICYCLE/PEDESTRIAN-FRIENDLY FACILITIES, CARPOOL INCENTIVES, REDUCED BUILDING FOOTPRINT AND MAXIMIZED OPEN SPACE.

**GREEN PRODUCTS:** LANDSCAPE FORMS, BIKE RACKS,

ELECTRIC VEHICLE INFRASTRUCTURE'S ELECTRICAL

VEHICLE-RECHARGING STATIONS AND SARNAPR'S WHITE HEAT-REFLECTING ROOFING.



THIS BARNES & NOBLE, PART OF  
GEORGIA TECH'S MANAGEMENT  
BUILDING AT TECHNOLOGY  
SQUARE, SERVES AS BOTH THE  
CAMPUS BOOKSTORE AND A  
COMMUNITY GATHERING PLACE.  
PHOTO BY ED WOLKIS.





GEORGIA TECH HAS HELPED TRANSFORM A ONCE CRIME-RIDDEN NEIGHBORHOOD INTO A PEDESTRIAN-FRIENDLY COMMUNITY. PHOTO COURTESY OF GEORGIA TECH.

one-third of a mile from the North Avenue subway station, and there are at least two bus stops located less than 1,000 feet from the Management Building's main entrance on West Peachtree Street. The Management Building is also bicycle-friendly, featuring 26 double-capacity bike racks from Landscape Forms Inc. (Kalamazoo, Mich.) and four showers for use by bicyclists.

Although not part of the calculations for Sustainable Sites Credit 4.1: Public Transportation Access, the opening of Technology Square also saw the unveiling of a new form of public transportation in Midtown: the Tech Trolley. Georgia Tech's new Tech Trolleys are alternative-fueled vehicles inspired by the design of old-fashioned trolleys, such as the ones that were a distinct part of Atlanta's urban landscape in the late 19th and early 20th centuries. These vehicles, which are powered by compressed natural gas, are open to the public and link up with local mass transit. Says Bob Furniss, Georgia Tech's Director of Parking and Transportation, "We want this trolley to be so convenient that people will want to hop on the trolley and not bother with driving over to Technology Square."

The presence of alternative-fueled vehicles at Technology Square will not be limited to the Tech Trolley. The Epstein Group was able to secure a grant from the U.S. Department of Energy to fund 13 electric vehicle-recharging stations from Electric Vehicle Infrastructure Inc. (Auburn, Calif.) for the parking garage.

Parking for the Management Building is located in an adjacent parking deck, a strategy that further contributes to the LEED effort. Georgia Tech limited the number of spaces allocated to the Management Building as part of the school's effort to discourage building occupants from driving. To encourage carpooling, the allocated parking for the Management Building features carpool spaces with preferential locations, and the school offers discounted parking permits for carpoolers.

The covered parking in the parking deck also helped the project earn a LEED point for Landscape and Exterior Design to Reduce Heat Islands, Non-Roof. As a means of demonstrating Georgia Tech's strong commitment to heat island reduction, light-colored, high albedo materials were incorporated at Technology Square

for non-roof impervious surfaces such as sidewalk pavers.

When it came time for specifying roofing for Technology Square, it became clear that Georgia Tech's standard two-ply modified bitumen roofing would not be very conducive to the reduction of heat islands. At the urging of The Epstein Group, Georgia Tech decided to use a white heat-reflecting roof from Sarnafil (Canton, Mass.) on all of Technology Square's buildings, which has now become part of the school's design standards.

The final strategy used for reducing the heat islands surrounding the Management Building was to increase the amount of open space by reducing the building's footprint. Despite its urban location, the Management Building exceeds LEED open space requirements. The open space also makes for a more inviting setting for all of the mixed-use project's functions. Visitors and occupants alike can relax in a landscaped courtyard and walk on sidewalks shaded by trees.

The trees at Technology Square are considered an asset, but before construction began, a number of trees posed a challenge to the Georgia Tech and the project team. Thirty-six trees surrounded

the parking lots that the development was to be built upon. Not wanting to destroy the trees, Georgia Tech transplanted 28 trees from the project site to the existing Georgia Tech campus. The survival rate for the transplanted trees is very high, with 27 of 28 trees surviving. The cost of transplanting the trees is estimated at \$28,000, while the cost to have a landscape contractor provide and plant these trees at their existing size would have been \$280,000. Thus, tree relocation had a cost-benefit of over \$250,000 to Georgia Tech. This creative and sustainable solution also earned the Management Building one of its four LEED Innovation points.

In addition to the Management Building being awarded LEED Silver certification, Pedestrians Educating Drivers on Safety (PEDS) recently recognized Technology Square as the most pedestrian-friendly new development in metro Atlanta.



THE TECH TROLLEY IS JUST ONE OF THE MANY ALTERNATIVE TRANSPORTATION OPTIONS AVAILABLE AT TECHNOLOGY SQUARE. PHOTO BY ED WOLKIS.

Only a few years ago, that section of Midtown was falling victim to urban blight, and now it is one of the fastest growing intown areas in America. Technology Square illustrates that with the proper vision and guidance, LEED certification and sustainable principles can transform and connect a university and a community. 📍

*Liz Chapman, a LEED accredited professional, is the Director of Communications for Atlanta-based sustainable design and consulting firm The Epstein Group, Inc. For more information, please visit [www.egrouparchitects.com](http://www.egrouparchitects.com).*

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