A guide to Georgia Tech's sustainable buildings and infrastructure.

Carbon Neutral Energy Solutions Lab. (CNES)
- First Platinum level LEED Certification at Tech
- This 42,000 sq. ft. building is an example of the methods and technologies that can be implemented in future construction
- 20,000 gal Cistern system for toilets and landscape irrigation
- Interactive Sustainability Dashboard

Engineered Biosystems Building (EBB)*
- 218,000 sq. ft. bio-tech research
- 43KW photovoltaic array
- 247,000 gal multi-building cistern system for toilets and irrigation
- Energy recovery systems air/water waste heat, chilled beams, and solar hot water heating system
- Reuse of existing lumber, "TreeCycling"

Caddell Building* (image below)
- 11,000 sq. ft. with offices, student work areas, and flexible learning spaces
- Passive shading strategy allows 100% day lighted views of occupied spaces while minimizing heat gain
- Re-used existing concrete/steel frame structure
- Existing structural systems exposed as a Building Construction educational tool

*Buildings currently seeking LEED certification and anticipated to achieve levels as listed.
**Buildings with sustainable features were designed using sustainable practices however did not seek LEED certification.

Tour Wayfinding Map

** Stormwater Management
- Over 2,260,000 gal Storage
- Cisterns for Irrigation
- Cisterns for Re-use, Irrigation, Infiltration
- Infiltration Cells/Bio-Swale/Rain Garden
- Photovoltaic (PV)
  - Total 623 kW
- Green Roof
- Wind Power

Sustainable features **

Platinum • 528,157 gsf
Gold • 1,892,671 gsf
Silver • 509,716 gsf
Certified • 38,750 gsf

LEED
(Leadership in Energy and Environmental Design)

Platinum • 528,157 gsf
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Certified • 38,750 gsf
Sustainable features **

* Certification Pending

Total 2,069,294 gsf

128.5 sf LEED Space/Student (includes parking considerations)
Landscape Masterplan Goals:

- Develop integrated, ecologically-based landscape and open space systems
- Enhance living, working and learning environment
- Unify the campus with a distinct sense of place
- Increase tree canopy—replace aging trees
- Create an Eco-Commons (80 acres)
- Implement ecological performance requirements of 50% reduction of storm water runoff

Eco-Commons Infiltration & Rain Garden

- The Human Landscape
- The Ecological Landscape
- The Campus Landscape Diagram

Eco-Commons Overlay Diagram

- The Human Landscape
- The Ecological Landscape
- The Campus Landscape Diagram

Klaus Advanced Computing Bld.

2006, Perkins + Will / W.G. Yates And Sons
- 120,000 gal cisterns with rain gardens and infiltration resulting in 34% decrease in rate and quantity of runoff
- High-performance glazing, shading, daylighting, occupant sensor controlled and daylight-responsive lighting

Glenn and Towers

2012 Renovation, VMDO/Graves & Wilkinson/New South Construction
- 8,000gal cistern connected to Britannia and Madison system providing irrigation
- Replaced windows to increase building efficiency
- Installed energy efficient lighting

Historic Academy of Medicine

2012 Renovation, Davydo Bui:land/Cris Sheehan:Casey: Original designs, Philip Stueve
- Through adaptive reuse the building was saved, architectural and interior artifacts were preserved, and the spaces were renovated to accommodate a wide variety of educational and social events

Hinman Building

- Improved energy performance by more than 20% of baseline in ASHRAE 90.1, while protecting the character defining features of an historic building
- Maintained 75% of the existing structure

Old Civil Engineering Building

2009 Renovation, Turner/Barber Clootie & Horltsin/Jamane
- 6,500 gal cistern as part of a 30% reduction of stormwater runoff from site pre-renovation levels
- 96% of the existing building walls, floors and roof elements were maintained in the renovation

Stephen C. Hall Building

2012 Renovation, Smith Dalia Architects, LLC/ Hogan Construction
- 10,000 gal cistern collecting stormwater for irrigation
- Replaced windows to increase building efficiency
- Upgraded mechanical systems
- Installed energy efficient lighting

Ken Byers Tennis Complex

2012, Woldport/New South
- 35% water use reduction by use of low-flow fixtures
- Designed to the standards of the Advanced Buildings Core Performance Guide for enhanced efficiency
- 90% of spaces have outdoor view (excluding courts)

Scheller College of Business

2010, Thompson, Flanagan, Stanford & Associates/Handy+Construction Company
- 16.5% more energy-efficient than the national standard
- 13th LEED certified project in US and 2nd in GA since system was launched in 1998

Marcus Nanotechnology Building

2009, John C. W. V. Bouver: Jackson/Beck-Turner
- Included an 80,000 gal cistern that is being connected to the campus stormwater masterplan system

McCamish Pavilion

2012 Renovation, Populous/MAKES/Whiting Turner Construction/NG Contracting
- Over 80% of existing structural walls floors and roof were reused
- Maintained historic dome structure

Zelnak Basketball Practice Facility

2000, HARRY International/Gay Construction
- 5,000 gallon cistern collecting stormwater from the roof for irrigation
- Re-circulating air system allows the 11,000 SF of space to be heated and air-conditioned using low velocity air conditioner/heater

Mewborn Field

2009, Rosser International/Barton Malow
- The first LEED Gold certified women’s softball facility in the country
- 42,000 gallon cistern under its playing field is large enough to irrigate 1.5 inches per week for 5 weeks, eliminating the need for potable irrigation

North Avenue Apartments and Dining Hall

2008, Hartbury, Evans, Wright, Vlattan / Memfie & Winer / Jarnial Construction
- Extensive green roof on dining hall
- Food waste collected/composted by a local composter, diverting 33.5 tons of food waste yearly from landfills
- Largest LEED EB O&M Gold university housing complex

Chapin Building*

2012 Renovation, Lord:Beck:Surgeon/Lusk Construction
- Original Infirmary Building
- Converted buildings to dual flush toilets and low flow fixtures
- High efficiency semi-instantaneous boilers distribute domestic hot water and hydronic heating to 3 buildings

Fitten, Freeman, Montag

Bayer Robertson, Collins, Cooper, Carse/Winter Construction
- 8,000 gal cistern for irrigation/toilets
- Converted buildings to dual flush toilets and low flow fixtures
- High efficiency semi-instantaneous boilers distributing domestic hot water

Joseph B. Whitehead Student Health Center

2011, Lord:Beck:Surgeon/Whiting Turner Construction, Minor Interior Renovation by Bronman, Score - JPP Construction
- Innovative use of controlled daylighting
- Toilets and sinks were converted to low flow fixtures resulting in a 27% reduction in potable water use

Campus Recreation Center**

2004 Renovation, Hastings & Chivetta Architects
- Innovations include: Concrete Bldg... Lusk Construction
- Two 1,500 gallon cisterns
- 340 kW PV installation was the largest installation of its type when it was constructed. A solar thermal system is used to heat the pool to 78°F.

Mason Building**

2013 Renovation, Cooper Carry/Perkins + Will / Ballard Beatty
- Removed asbestos containing materials
- Replaced windows to increase efficiency
- Upgraded mechanical systems to improve energy efficiency
- Installed new energy efficient lighting