



WAKE FOREST
UNIVERSITY



WELCOME CENTER

GREEN FEATURES

Sustainable Design at
Wake Forest University



Showcasing Wake Forest University's **COMMITMENT TO SUSTAINABILITY**

Why is designing and constructing a sustainable building important? A sustainable building integrates strategies that optimize occupant well-being and comfort, provides efficient systems that reduce maintenance expenses, and maximizes the use of materials that lessen negative impacts on our environment.

To help quantify the sustainable strategies used in construction projects, Wake Forest University has elected to follow the LEED® (Leadership in Energy and Environmental Design) green building certification system published by the U.S. Green Building Council®. LEED identifies strategies in different categories including Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Interior Environmental Quality, and Innovation in Design, and rates completed projects at four levels describing the number of strategies successfully implemented in that building.

The Welcome Center was designed to reinforce the character and atmosphere of the Wake Forest University student experience, while employing sustainable design strategies that enhance all aspects of the building's performance. Final certification is pending, but the building is poised to achieve Gold Certification, the second-highest certification level.



Visit the website of Wake Forest University's Office of Sustainability to learn more about our campus-wide efforts: sustainability.wfu.edu



STORMWATER QUALITY AND QUANTITY

Five bio-retention cells on-site capture stormwater and filter it of contaminants while slowing the volume of water leaving the site. Two cisterns under the parking area, with a total capacity of nearly 110,000 gallons, also capture water to lessen impacts downstream.

LOW-VOC MATERIALS

All indoor building materials with the potential to off-gas volatile organic compounds were tracked to ensure that total VOC levels were below relevant standards for different material categories. From paints to plywood, carpets to caulks, the building materials have low VOCs to improve indoor air quality for visitors and employees alike.

REGIONALLY SOURCED MATERIALS

Over 30% of the construction material (by cost) was sourced within 500 miles of the building site. At the Welcome Center, these materials include brick from Old Virginia Brick (the same brickmaker as the original 1950s Reynolda Campus buildings) and granite from Mt. Airy, North Carolina, as well as concrete, drywall, brick pavers, and bluestone.

DAYLIGHTING AND EXTERIOR VIEWS

75% of the regularly occupied spaces in the building receive a minimum of 25 footcandles of illumination on an average day, which allows for less reliance on artificial light along with improved indoor quality. Contributing to this strategy is the curved skylight above the Conservatory, a double-wall insulated fiberglass panel system that diffuses light and provides natural illumination even on overcast days. In addition, virtually all regularly occupied spaces have access to exterior views.

HIGH-EFFICIENCY BUILDING SYSTEMS

The mechanical systems were designed for improved performance, resulting in a projected 28% savings of energy and cost. Projected water usage was reduced by nearly 47% by employing dual-flush toilets and low-flow faucets. Individual utilities (electricity, water, and heating) are monitored through a metering system to allow for an understanding of how the overall system is actually performing, and provide opportunities to reduce consumption.

THE ROLE OF RECYCLING

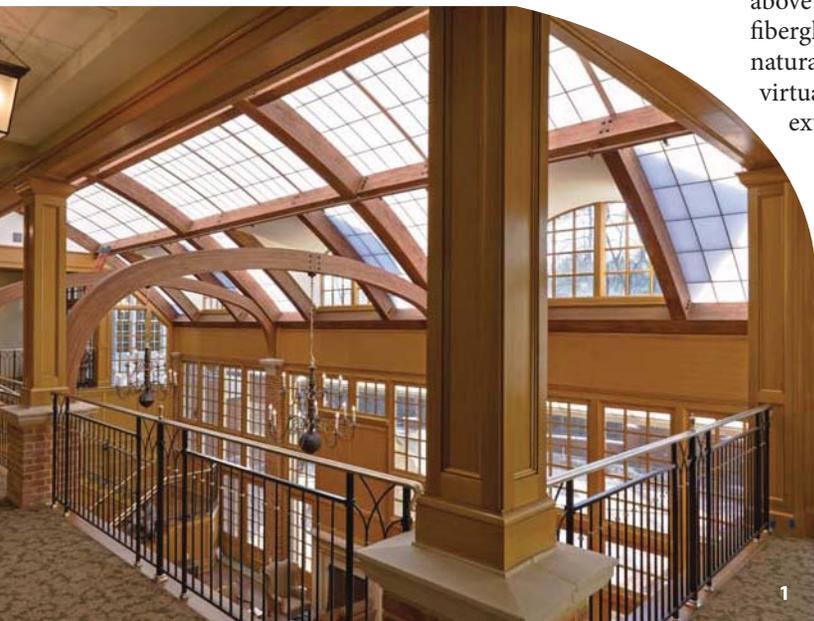
The General Contractor was able to divert nearly 90% of the waste generated during construction from the landfill to various recycling and reuse paths. For building occupants and visitors, recycling centers are provided indoors and out. At the other end of the recycling spectrum, recycled materials account for 30% of the total construction material (by cost). These materials include various concrete, masonry, and steel elements, as well as the distinctive copper roof.

FSC-CERTIFIED WOOD

Woodwork is used extensively within the Welcome Center to bring warmth and character to the building, so the design team established and achieved a goal of 50% of new wood (by cost) to be certified by the Forest Stewardship Council. FSC certification indicates that wood products have been harvested from a forest managed in an environmentally responsible manner.

MATERIALS REUSE

The Welcome Center features three rooms with restored historic light fixtures from original Reynolda Campus buildings. This strategy puts to use fixtures that had been damaged and in storage, and lends an historical aspect to the building. These fixtures are lit using LED bulbs and compact fluorescent bulbs to save energy.





Sustainable Design Strategies Used Include:

High-Efficiency
Mechanical Systems
Dual Flush Toilets
Daylighting and
Exterior Views
Stormwater Bio-
Retention Areas
Construction Activity
Recycling
Regionally Sourced Materials

Recycled Content Materials
Low-VOC Materials
FSC Certified Wood
Materials Reuse
Energy Efficient Wall
& Roof Construction
Measurement & Verification
Building Monitoring
Thermal & Lighting
Controllability

for more information

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Building Dashboard

www.buildingdashboard.com/clients/wakeforest/welcomecenter

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