



**CLINICAL AND TRANSLATIONAL
RESEARCH BUILDING
LOUISVILLE, KENTUCKY**

41.7% reduction of annual energy use

42.5% reduction of annual water use

over **1616 tons** of material
were diverted from landfills during construction

LEED® Facts

**University of Louisville CTR Building
Louisville, Kentucky**

LEED for NC, Version 2.2
Certification awarded February 4, 2010

Gold 41 points*

Sustainable Sites	8/14
Water Efficiency	4/5
Energy & Atmosphere	7/17
Materials & Resources	5/13
Indoor Environmental Quality	13/15
Innovation & Design	4/5

*Out of a possible 69 points

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.



UNIVERSITY OF LOUISVILLE, CLINICAL AND TRANSLATIONAL RESEARCH BUILDING

Pursuing LEED Late in the Game

Forward thinking enabled the University to meet the goal of Certification

PROJECT BACKGROUND

In the quest to continue to excel in the biomedical sciences nationwide, the University of Louisville's Health Sciences Center embarked on the design of the Clinical and Translational Research (CTR) building in 2004. The facility was to be a continuation of the goals of creating state-of-the-art research facilities in order to attract and retain the best researchers from among the nation, consolidate existing programs, and provide for the opportunity to augment on the success of programs already established within the Health Sciences Center.

SUSTAINABLE FROM THE START

Achieving LEED Gold Certification was clearly one of the greatest accomplishments of this project. These days it is common for buildings to pursue certification, but it is extremely rare that certification isn't actually pursued until the project is well into construction (foundations and superstructure were completed). Even though the University did not initially intend to pursue LEED certification, during construction they began to consider it. The design team, contractor and owner met to discuss the possibility of pursuing LEED this late in the game and determined that certification would be achievable since the team had incorporated various sustainable design measures into the project already. With additional modifications to the project, the goal of certification was pursued.

STRATEGIES AND RESULTS

In an effort to dramatically reduce the CTR's use of potable water, the project team included high efficiency fixtures to achieve a 42.5% reduction of water use within the building. For the buildings landscape, condensate drainage from the cooling coils in five of the air handling units is used for irrigating. The use of the condensate drainage as well as the selection of drought tolerant plants has allowed for the irrigation system to reduce the use of potable water by 100%. Incorporating these water reduction strategies, the project team reduced the building's use of potable water from 1,157,016 gallons to 631,887 gallons annually.

The use of energy-saving natural light was also a key factor in designing this biomedical research facility. Light shelves and louvers control the amount of sun entering the building and contribute to the over the 78% of the occupied spaces in the building are able to achieve a minimum 25 footcandles of illumination. In addition, the building energy management system controls the artificial lights allowing for a reduction of lighting when not required and turns off electric lights when they are not being used. The 100% reflective roof also contributes to lowering cooling costs while at the same time reduces the heat island effect on the urban environment that the CTR is set.

The CTR also offers employees and visitors the availability of using either public transportation or riding a bicycle to the building. There are 20 Transit Authority of River City (TARC) stops within 1/4 Mile of the Project location on 6 different bus lines. These 6 lines have a total of 712 scheduled stops each weekday at the 20 bus stop locations providing ample opportunity for use of the TARC system at any time of the day and from anyplace on the system. There are also built-in showers and bicycle racks provided for employees and visitors, so they can also avoid driving to the CTR if they so choose.

ABOUT CLINICAL AND TRANSLATIONAL RESEARCH BUILDING

Located at 505 South Hancock Street, the Clinical and Translational Research Building will support the region's growing research needs for working with oncology research and is associated with the James Graham Brown Cancer Center. The facility is 287,000 gross sq feet and will house 5 floors of biomedical research labs including 4 BL3 labs. The first floor will be a point of arrival to the HSC medical campus with 4 seminar rooms as well as 2 large conference rooms. This building was designed and constructed to be eligible for certification as a LEED certified facility.

"Not long ago, we promised that University of Louisville would become a sustainability leader, it's rewarding to get verification from the nation's most respected green building organization that we're moving in the right direction."

Dr. James R. Ramsey
University of Louisville President



Architect: Arrasmith, Judd, Rapp, Chovan Inc., Architect of Record
Smith Group, Design Architect & Lab Planners

Civil Engineer: Dunaway Engineers

Commissioning Agent: Messer Building System Group

Construction Manager: Messer Construction

Landscape Architect: Vivian Llambi & Associates

LEED Consultant: SmithGroup

Lighting Designer: SmithGroup

MEP Engineer: Staggs & Fisher Consulting Engineers

Structural Engineer: Rangaswamy & Associates

Project Size: 287,970 sf

Total Project Cost: \$143 million

Cost Per Square Foot: \$496.58

Photographs Courtesy of: Prakash Patel

ABOUT KENTUCKY USGBC

Our goal is to improve the health and welfare of all Kentucky citizens through a sustainable and responsible built environment. Through education and awareness we encourage the use of sustainable practices that provide our residents with a healthy environment in which to live, work and learn.



KENTUCKY CHAPTER
Greening the Bluegrass

www.usgbckentucky.org
888-KY-USGBC