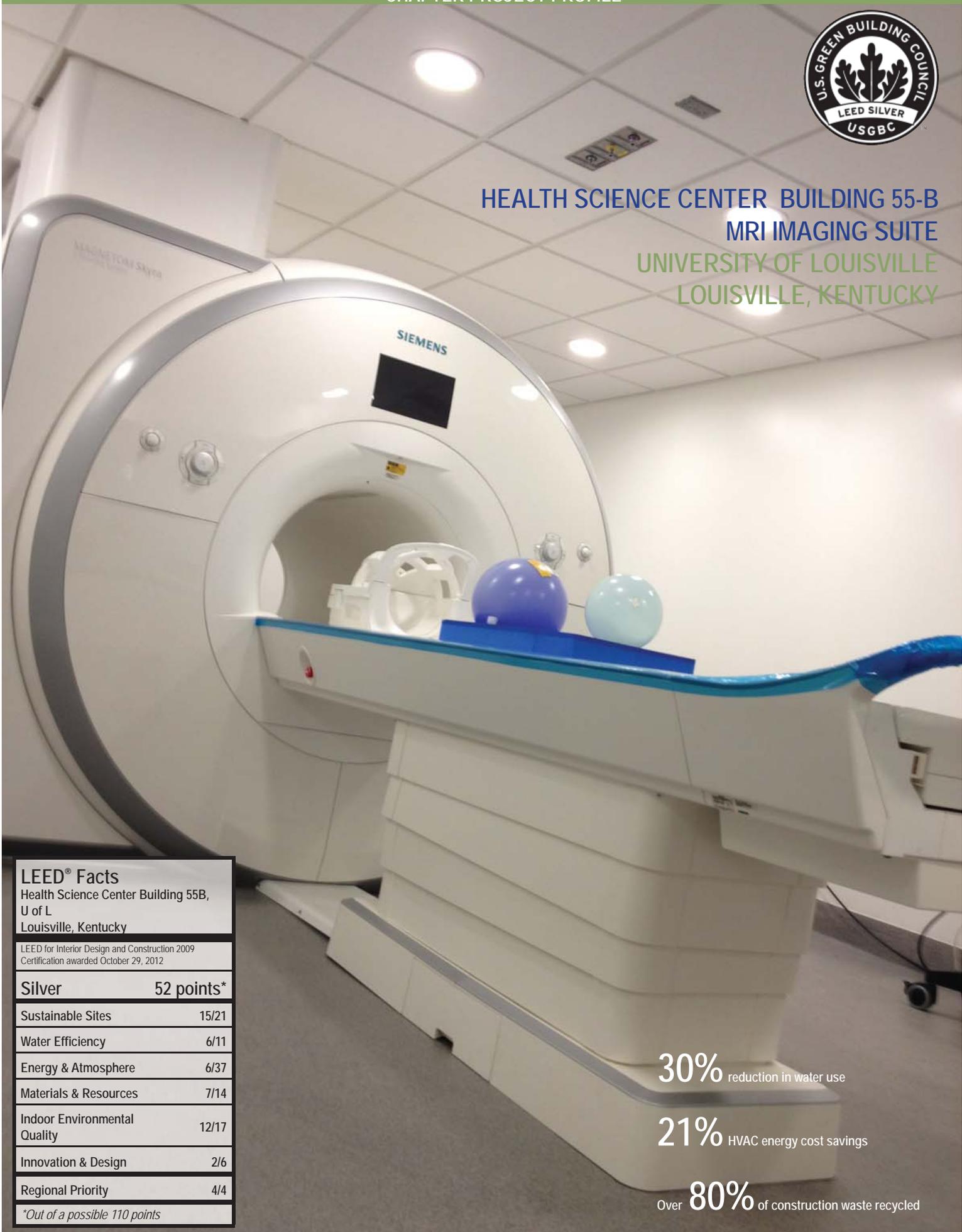




HEALTH SCIENCE CENTER BUILDING 55-B
 MRI IMAGING SUITE
 UNIVERSITY OF LOUISVILLE
 LOUISVILLE, KENTUCKY



LEED® Facts

Health Science Center Building 55B,
 U of L
 Louisville, Kentucky

LEED for Interior Design and Construction 2009
 Certification awarded October 29, 2012

Silver 52 points*

Sustainable Sites 15/21

Water Efficiency 6/11

Energy & Atmosphere 6/37

Materials & Resources 7/14

Indoor Environmental Quality 12/17

Innovation & Design 2/6

Regional Priority 4/4

*Out of a possible 110 points

30% reduction in water use

21% HVAC energy cost savings

Over **80%** of construction waste recycled

UNIVERSITY OF LOUISVILLE, HEALTH SCIENCE CENTER - BUILDING 55 B MRI IMAGING SUITE

A Complex Green Renovation

Even Small, Complex Projects Can Effectively Achieve Sustainable Goals

PROJECT BACKGROUND

The University of Louisville (UofL) is committed to creating a sustainable and environmentally friendly campus. When the Health Science Center expanded their imaging capabilities, the University opted to renovate a small portion of an existing facility to house a new state of the art Magnetic Resonance Imaging Suite. The University challenged the design team to pursue the University's first LEED for Interior and Design and Construction certification, setting a target of LEED certified.

ACHIEVING HIGH GOALS FOR A SMALL PROJECT

Originally built in 1967, the basement space in Building 55-B needed mechanical, electrical and finishes upgrades to house the new MRI Imaging Suite. The design team was tasked with inserting large MRI equipment (3 Tesla MAGNETOM Skyra with Fixed Table by Siemens Medical Solutions) into the space in a way that was safe and efficient for research subjects. Also the team was tasked with reconfiguring support spaces and upgrading mechanical, electrical, plumbing and information technology systems to meet new building standards.

STRATEGIES AND RESULTS

A building automation system (BAS) was installed to monitor and control the equipment by the university's physical plant division. This system can be used to remotely adjust settings that allow the owner to save energy while the space is occupied, and to turn equipment off when it is unoccupied. Efficient T8 fluorescent lighting was installed in the new spaces and dimmer panels were installed to control light intensity in certain areas. Card readers were also employed to safeguard access to certain areas of the MRI Suite. Lighting controls were provided to allow 100% of occupants to make adjustments to suit individual needs. These energy measures reduced energy costs by 21.4 percent and lighting energy costs by 16.8 percent, earning 6 points for Optimized Energy Performance and exceeding ASHRAE 90.1 standards as required by the State of Kentucky's energy efficiency requirements.

New ultra-efficient plumbing fixtures were installed, including a 1.28 gallons per flush (gpf) water closet, 0.125 gpf urinal, and 0.5 gpm automatic lavatory faucet. These fixtures were projected to reduce water use by over 30 percent, earning 6 points for water use reduction and also qualifying for a Regional Priority point.

Environmentally responsible materials were used throughout. Over 25 percent of the materials used for the construction of the space were extracted and manufactured within 500 miles of Louisville and the recycled content of materials used exceeded 20 percent. The completed MRI Imaging Suite exceeded its LEED Certified target, earning LEED Silver certification. Perhaps more importantly, the project demonstrates that even small, complex upgrades to existing campus buildings can recycle outdated facilities into new green, LEED certified spaces.

ABOUT THE HEALTH SCIENCE CENTER

The Health Sciences Center is home to 17 Centers and Institutes conducting research in fields ranging from bioethics and health hazard prevention to genetics, molecular medicine, cancer nursing, cellular therapeutics and spinal cord injury.

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"Together, we can make our community a greener and healthier place for our children, our grandchildren and all the generations to come."

President James Ramsey, *University of Louisville*



Architect of Record: Lord, Aeck & Sargent
Associate Architect: Voelker Blackburn Niehoff Architects
Civil Engineer: Jacobs Engineering
Commissioning Agent: Facilities Commissioning Group
Contractor: Messer Construction Company
LEED Consultant: Lord, Aeck & Sargent
MEP Engineer: Staggs and Fisher
Structural Engineer: Senler, Campbell & Associates
Project Size: 3,000 sf
Total Project Cost: \$5.5 million
Cost Per Square Foot: \$1,833
Photographs Courtesy of: Messer Construction Company

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.



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