

# LEED Master Site

MU continues to show sustainability leadership by implementing a new approach to LEED (Leadership in Energy and Environmental Design) called Master Site. This Master Site process is unique because it allows MU to translate LEED principles—currently written for individual building projects—to more overarching sustainability goals that can be applied campuswide. This strategic approach allows project teams to focus on overall sustainable design goals rather than LEED points alone. For instance, rather than addressing storage and collection of recyclables for a single building, MU is submitting its campuswide recycling plan as one of the Master Site credits.

MU is also pursuing Master Site credits in: Site Development to Maximize Open Space, Water Efficient Landscaping, Environmental Tobacco Smoke Control and On-Site Renewable Energy. The university also is seeking Innovation in Design credits for Green Education, Climate Action Planning, STARS (Sustainability Tracking, Assessment & Rating System), a Campuswide Building Management System and Exemplary Performance in Maximizing Open Space. The Planning, Design and Construction division of Campus Facilities is further tailoring MU Master Site goals into Sustainable Design Guidelines for future projects.



### Water-Efficient Landscaping

**MU irrigates 90 percent less than other campuses.**

MU uses native and well adapted non-native plant species that can thrive with Missouri's average precipitation. During the establishment stage of a landscape, MU will irrigate plants through hot and dry periods. Moderate amounts of potable water are used to irrigate lawns that are used for outdoor events.



### Credits sought at a campuswide level...



### ...could be pre-approved for individual LEED Projects



# Renovation and Construction

With the complete renovation of Gwynn Hall set to begin fall 2012, MU continues to build upon the stewardship renovation model adopted in 2009 when the Board of Curators approved \$19 million in bond funding.

“We realize the sole reason these buildings exist is because of the university’s academic mission,” said Gary Ward, MU associate vice chancellor-facilities. “By spreading the \$19 million around to various buildings and addressing only the systems therein, the academic performance of those buildings would not be improved. In short, we may have a dozen or so new HVAC systems but what did it do for the teaching and research missions of the university? In most cases, very little.”

By using the bond funding to renovate Switzler and Tate halls, the university gained 280 classroom seats and 44 additional faculty offices, greatly improving the buildings’ academic performance. At the same time, more than 70 percent of the renovation costs went toward eliminating deferred maintenance. Because these projects were so successful, Gwynn Hall emerged as next on the list of 30 buildings on campus that need a complete renovation.

Gwynn Hall, built in 1920 on the White Campus, currently has over \$9.4 million of needs and is budgeted to be completely renovated for about \$11 million. In other words, over 85 percent of the funds used in the upcoming Gwynn Hall renovation will go directly toward eliminating deferred maintenance and other facility needs, while at the same time greatly improving the academic performance of the facility.

The Gwynn Hall project will renovate 39,000 square feet, including office space, three centrally scheduled classrooms, an estimated 3,500 square foot research lab and a metabolic kitchen for nutritional research. The project will improve ADA accessibility as well as fire protection and security systems and has been registered for LEED certification. It is scheduled to reopen in January 2014.

Other projects under way, in order of completion, include:

- > The Patient Care Tower, sited as a north addition to University Hospital, is on schedule for substantial completion in January 2013. The new 315,000 square foot, seven-story structure will provide additional operating rooms, pre-and post-procedure rooms, a total of 90 private patient rooms (30 per floor on each of the upper three floors) and a new facility for Ellis Fischel Cancer Center. It is scheduled to open in April 2013.
- > The Animal Resource Center will be a 20,548-gross-square-foot building containing animal holding rooms for non-rodent, animal-based research, located east of the College of Veterinary Medicine. This project is identified as one of several in the campuswide Vivarium Master Plan for meeting current needs and projected growth in life sciences research. It also is required for the Association of Assessment and Accreditation of Laboratory Animal Care (AALAC) accreditation at the College of Veterinary Medicine.



New Patient Care Tower under construction.

## Links

### Find out more about the MU Campus Master Plan

- 1. MU Mission**  
<http://www.missouri.edu/about/mission.php>
- 2. MU Strategic Plan**  
<http://www.strategicplan.missouri.edu/>
- 3. Campus Master Plan**  
<http://www.cf.missouri.edu/masterplan/intro/intro.html>
- 4. Mizzou Advantage**  
<http://www.missouri.edu/mizzou-advantage/>
- 5. Sustainability**  
<http://sustainability.missouri.edu/about/mission.html>

## Comments?

Comments should be sent to the chair of the Campus Planning Committee, e-mail address: [OkkerP@missouri.edu](mailto:OkkerP@missouri.edu).

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ENVIRONMENTAL STATEMENT				
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TREES 7 fully grown	WATER 3,039 gallons	ENERGY 2.5 million BTU	SOLID WASTE 185 pounds	GREENHOUSE GASES 631 pounds of CO <sub>2</sub>



University of Missouri  
180 General Services Building  
Columbia, MO 65211  
t: 573.882.3091  
<http://www.cf.missouri.edu/masterplan/>



# Campus Master Plan Update

UNIVERSITY OF MISSOURI  
MARCH 2012 DRAFT

# 2012

## Moving Forward

The goal of the MU Campus Master Plan, from its beginning in 1981, has been to create a unified, efficient environment that is inviting to students and conducive to MU’s mission of teaching, research, public service and economic development. With this in mind, MU will merge the athletics, hospital and residential life master plans with the campus master plan.

“We strive to accomplish the Board of Curators’ policy of ‘maintaining and making more efficient and attractive the university’s physical plant,’” said Jackie Jones, vice chancellor-administrative services. “By merging all of the master plans, we can build upon what has been accomplished over the past 30 years and work together to plan for growth in every direction and within every department on campus.”

The Campus Planning Committee, (a chancellor’s standing committee made up of faculty, students and staff), master planner Linda Eastley and MU Campus Facilities staff uphold this goal and oversee campus planning today.

A unique aspect of MU’s master plan is that it is a continual work in progress, printed as a “draft” each year. Campus community input is critical to the plan, and an open forum is held annually to help shape the plan and to update the public on past, present and future projects.



Photo by Robert Llewellyn, MU Publications and Alumni Communication

It is with grateful hearts that we dedicate this year’s master plan to Perry Chapman, MU master planner from 1998-2010, who died unexpectedly Dec. 8, 2011. Chapman will be remembered at MU for unifying the campus through planned green space and for defining MU’s sense of place.

## PLANNING PRINCIPLES

Campus planners realized the rich and distinctive heritage of Mizzou by identifying planning principles to help bring order to the appearance of the campus and direct future change.

- Reinforce the University Mission and Values**
- Proclaim Pride of the State**
- Create a Strong ‘Sense of Place’**
- Blend Diversity with Unity**
- Consider Recruitment-Retention**
- Provide Planning and Design Integrity**
- Embrace Environmental Sustainability**
- Enhance Community Spirit**
- Respect Natural and Architectural Heritage**
- Allow for Prudent Expansion of Campus Functions**
- Retain Pedestrian Dominance**
- Maintain Transportation & Vehicular Circulation**
- Respond to Accessibility Needs**
- Preserve Facilities and Grounds Stewardship**





A rendering depicts the renovated north facing facade of Mark Twain residence hall, which will reopen in August 2013. Rendering courtesy of Bozoian Group

## Residential Life

Mark Twain residence hall and Pershing Commons are the latest facilities to undergo major renovations as part of the Residential Life Master Plan (RLMP). Johnston Hall will follow in February 2013, with dining hall renovations beginning in January 2014. Both will reopen before classes begin in fall 2014. Wolpers Hall renovations will begin in February 2014 and reopen in fall 2015.

The RLMP has implemented a combination of demolition, renovation and new construction in order to create the types of spaces today's students require. Residential Life has reduced the capacity of the buildings through renovation in order to create ample designated study space on each floor and both informal and formal meeting spaces. The RLMP is now in phase four of the five-phase plan to renovate or replace all residence halls at MU.

The first phase of the RLMP initially addressed critical measures to mechanical systems and/or building exteriors in 12 existing residence halls until full renovations could occur. To date, the RLMP has demolished four old residence halls, added 11 new halls and renovated Hatch, McDavid, Schurz, Defoe, Graham, Hudson and Gillett residence halls, increasing capacity by 848 beds. Bingham and Rollins common buildings have also been renovated.

Mark Twain residence hall closed in December 2011 and construction began in February. Built in 1965, the residence hall is undergoing its first major renovation, which will upgrade the facility to meet student needs, building and life-safety codes, including fire-protection sprinkler systems, as well as improve the building's exterior and interior. Mark Twain Market dining area, previously renovated in 2000, will close in May 2012 for enhancements that will focus on expanding the seating, food storage and receiving areas. The entire facility is scheduled to reopen in August 2013.

The Pershing Commons renovation will include a new elevator and other ADA upgrades, along with a new storefront system and improved interior spaces. It will also delineate formal entrances on the north and south sides of the building. Pershing is scheduled to reopen in January 2013.

The final phase of the RLMP pertains to Laws (2016), Lathrop (2017) and Jones (2018) halls.

## Solar and Wind

Two small-scale, renewable-energy projects at MU will allow students and faculty to assess the real-life applications of wind turbines and solar photovoltaics.

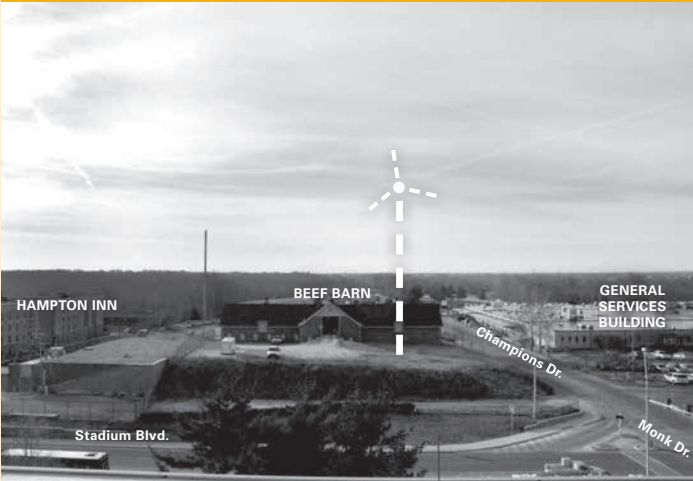
"We believe in partnering with academic departments whenever possible. This is an opportunity for Campus Facilities-Energy Management to study the benefits of the technology and determine if it is something we might expand upon in the future. Equally important is the opportunity it provides for MU students and faculty who will be able to see and study renewable energy sources," said Paul Hoemann, director, MU Campus Facilities-Energy Management.

The wind turbine will be installed at the southeast corner of Stadium Boulevard and Champions Drive, near the Beef Barn, which now serves MU Campus Facilities as shop space and a storage facility. The turbine will be connected to the Beef Barn and, when it is in full operation, will supply all of the electricity needed for the 16,000-square-foot facility.

Two of Missouri's bats (Indiana bat and gray bat) are classified by the U.S. Fish and Wildlife Service as endangered species, requiring protection to survive environmental disturbances. With this in mind, Energy Management asked researchers at the U. S. Forest Service's Northern Research Station (NRS), housed at MU, to conduct a pre-construction acoustic monitoring study. NRS concluded that fatality numbers would not have a significant impact on bat populations in the region. Energy Management will evaluate locking the wind turbine blades at night during migratory seasons.

A separate project involves installing a solar photovoltaic system on the new fuel unloading building at the MU Power Plant.

Together, the solar panels and wind turbine will supply the equivalent of all of the electricity needed for four single-family homes. Both projects are scheduled to be finished by fall 2012.



The proposed wind turbine to be installed at the corner of Stadium Boulevard and Champions Drive.

