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## Chapter Newsletter - December 2011

### Upcoming Events

Dec 13: [Holiday Party](#)

Dec 14: [Monthly Lunch & Learn](#)

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The US Green Building Council (USGBC) Memphis Regional Chapter is a 501(c)3 non-profit organization formed with a mission to transform the way

### From the Editor

by Dmitry Ozeryansky, Ozeryansky Engineering



This holiday season we'd like to note all the great work our members and supporters are doing in design, development, and construction firms in the mid-South. We're spotlighting a few projects, just a sampling of some of the great work you've all been doing over this past year:

[Universal Life Insurance Building: Renovation](#)

[Sewanee University, Snowden Hall: Renovation](#)

[University Place: Neighborhood Development](#)

[MATA's Airways Transit Center: New Construction](#)

Also this month, we're excited to start a new column: "[Performance Home Corner](#)"; we've got an update on our chapter [LEED regionalization](#) effort; and we're reprinting a [few articles](#) from the Memphis/Shelby County Office of Sustainability's Fall newsletter, because they are doing amazing things there!

Last but not least, we invite you all to join us for our Holiday Party on Tue, Dec 13 at Howard Hall, 2929 Madison Ave, from 5:30 to 9:00pm. We're very pleased to be doing a joint party with Memphis Heritage. Come out to celebrate our accomplishments over the past year, and anticipate the work ahead!

Happy Holidays to you all!

### Green & Historic

**An innovative merging of old and new, that sets an example of corporate responsibility.**

by Jimmie Tucker, Self Tucker Architects

The proposed renovation of the Universal Life Insurance Building is a unique project in which a historic building is to be preserved and restored utilizing the latest in environmental design and technology. Self + Tucker Architects has approached the revitalization of this historic building as an opportunity to show leadership in green design by pursuing LEED Core & Shell Certification for their future offices and design studio. Approximately 80% of the building also will be leased to other tenants.



The Universal Life Insurance Company building is a three-story 33,000 square foot office building designed in the Egyptian Revival style. It was built in 1949 by the architectural firm of McKissack & McKissack of Nashville. This building housed the national headquarters of the Universal Life Insurance Company. Because of the prominence of the site, the Universal Life Insurance Company erected a notable free-standing, post-mounted neon sign at the intersection, which has itself, become a local landmark.

The "green" aspects of the building will include strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

buildings and communities are designed, built, and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life.

For more info, visit our [website](#).

Bicycling to work is to be encouraged with plans for outdoor bike racks, indoor storage & shower facilities making this option more convenient & appealing.

Contractor Montgomery Martin anticipates around 80% of the construction waste to be recycled with the old brick and concrete being used for paving material and additional non-historic materials being diverted from landfills.

Wherever possible, materials with recycled content have been specified, including steel framing, carpet and ceiling materials. Low VOC selections have been made for paints, adhesives, carpets and wood products. Water-based products have been specified wherever possible.

The existing steel windows will be reglazed with "Low-e" glass to improve energy efficiency and reduce ultraviolet radiation that causes fading of fabrics. An interior storm window will further modulate heat loss and gain. To reduce the need for lighting during the workday, most workspaces have a window; 90% of the spaces have outside views.

Daylight and occupancy sensors will minimize electricity demand. Lights are engineered to automatically adjust artificial light output to daylight levels and shut down when rooms are unoccupied



Photovoltaic solar panels on the roof have been considered to supply a portion of the building's electricity needs. However, to date STA has not been successful in securing a grant from the TN Solar Institute.

The design of the building is an innovative merging old and new that sets an example of corporate responsibility around environmental and historic preservation issues. By reusing an existing building, the project contributes positively to sustainable, urban redevelopment.

## Sewanee University: Snowden Hall

### Memphis firm provides design, analysis, and commissioning services for LEED Gold retrofit.

by Jim Prillaman, OGCB, Inc.

Sewanee: The University of the South, in Sewanee, TN, places significant emphasis on sustainability in the design, maintenance, and operation of their campus. Nowhere is that more true than in the university's Departments of Forestry and Geology. The Forestry Department enjoys teaching on the University's 13,000 acres of middle Tennessee hickory-oak forest. When the departments' shared home in Snowden Hall came due for renovations and expansion in 2008, that project included a directive to pursue LEED Silver certification.



The original building was built in 1961 and was not air conditioned. The renovation and addition more than doubled the building size and modernized all of the facilities while retaining as much of the original structure (including interior partitions) as possible. Existing wood floors and paneling were preserved throughout the original structure. The addition shares the original building's wood floors and paneling. Like all campus buildings, the original structure and addition both have facades built from locally-quarried stone.

Faculty and students also coordinated with architects and civil engineers to design the site to address both storm water quality and quantity. This partnership resulted in a bioswale located at the south end of the site, parking lots utilizing sandstone aggregates to maintain the natural acidic condition of streams and soils, and a well near the building for monitoring water table levels.

In addition to building reuse and the integration of the design with the site, the project incorporated an array of energy systems aimed at sustainability. Chilled water from the campus chilled water plant feeds VAV air handling units to provide cooling; the plant's water-cooled centrifugal chillers offer greater energy efficiency than standard packaged cooling units or small air-

cooled chillers. A high-efficiency condensing boiler provides hot water for heating, and provisions were made to easily allow connection to a wood-fired boiler later. Lighting controls, including occupancy sensors, turn off lights in classrooms, labs, offices, and corridors when they are not occupied. Lastly, a photovoltaic solar array on the south side of the addition roof can furnish up to 19% of the annual electrical consumption.

The project attained LEED Gold certification earlier this year, exceeding the project objective, and it has been successfully housing the Forestry and Geology departments for over a year.

## **Memphis Neighborhood Attains LEED Designation**

*Reprinted from "Memphis and Shelby County Office of Sustainability Fall Newsletter."*

University Place Apartments, located at 1045 E.H. Crump Blvd., received certification from the U.S. Green Building Council as a LEED for Neighborhood Development (LEED-ND) project. This designation is difficult to achieve and is the first LEED-ND in Tennessee. Working closely with Memphis Housing Authority (MHA), the project is a joint venture between McCormack Baron Salazar, Inc. (MBS) and Community Capital. MBS is the nation's leading for-profit developer of economically integrated urban neighborhoods. Community Capital is a leader in the area of affordable housing financing and consulting in the City of Memphis. McCormack Baron Salazar is the only developer in the world to complete two such projects.

LEED-ND holds neighborhood development to the principles of smart growth and sustainable construction. University Place is a 405 unit, mixed-income, urban development on 30 acres of the former Lamar Terrace Public Housing site. Bill Carson, VP & Director of Sustainability at McCormack Baron Salazar said, "The end result and neighborhood transformation have been nothing short of extraordinary." The President of the U.S. Green Building Council, Rick Fedrizzi, noted: "Its latest LEED for Neighborhood Development project, University Place, is ushering in a new era of mixed-income sustainable development throughout the U.S."

The development scored high for "Smart Location & Linkages" and "Neighborhood Pattern & Design" for its easy access to the bus lines and other community amenities. The buildings themselves received a LEED Silver designation because of its "Green Construction & Technology." Currently the neighborhood is 99% occupied.

## **MATA's Airways Transit Center**

*Reprinted from "Memphis and Shelby County Office of Sustainability Fall Newsletter."*

The MATA Airways Transit Center, a new 25,000 square foot building at the corner of Airways Blvd. and Brooks Road, is seeking LEED Silver certification status. Five MATA routes will pass through this terminal and Greyhound will have 60 buses service it each day. Among a long list of sustainable features, this facility uses 35% less water than similar buildings, has efficient energy use and lighting controls, and recycled content was used in construction. The facility was designed by the

Memphis architecture firm brg3s, and seeks to be the first government owned LEED certified building in Memphis. The grand opening was held on November 8, 2011.

*our new column:*

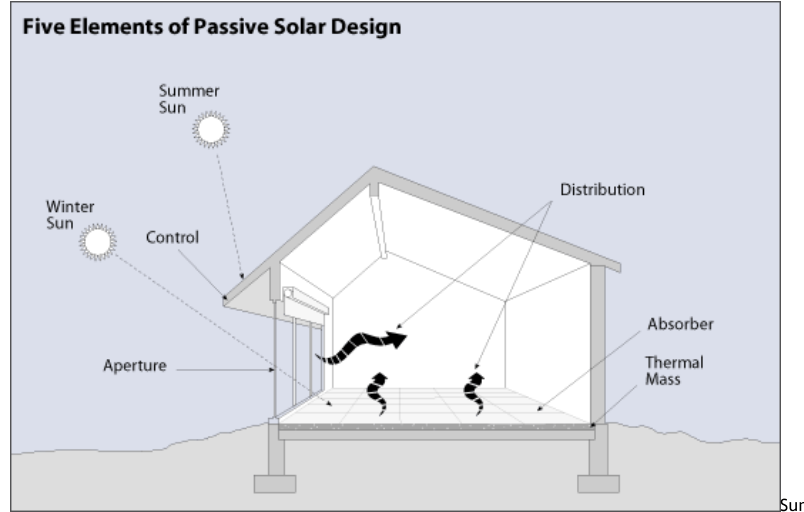
## **Performance Home Corner**

### **Green Basics, Green Tips**

*by Shaun Cummings, shauncummings@gmail.com*

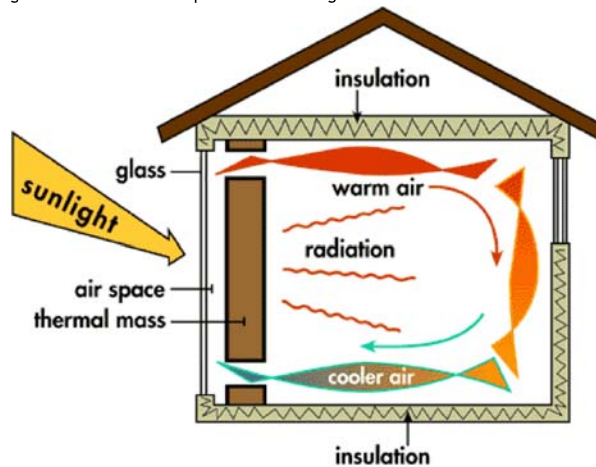
This week I ran across a quote from Socrates that made me realize the south facing site situation for energy efficient housing has been common knowledge for thousands of years. Socrates (470-399 B.C.) was quoted by the Greek historian Xenophon in Memorabilia as saying "Now in the houses with a south aspect, the Sun's rays penetrate into the porticoes in the winter, but in summer the path of the Sun is right over our heads and above the roof so that there is shade. If, then, this is the best arrangement we should build the south side loftier to get the winter sun and the north side lower to keep out the winter winds". The Greek father of philosophy was describing more than what we simply refer to as "overhang" or "solar shading". I believe he was alluding to the basic fundamentals of **site tempering** and **sun tempering**. Site tempering dictates that the house

site takes advantage of the natural benefits. Examples of site tempering are positioning a house to use existing trees for a wind break, utilizing a northern slope to create a berm wall and gaining the sun's full energy by providing total southern exposure. The importance of site tempering cannot be ignored since we know from software modeling that rotating a proper southern facing house 90 degrees can result in a 14% reduction in heating and cooling efficiency.



tempering is an essential element in passive solar design because it optimizes the relationship of the sun as it travels different paths across the sky in the winter (low) and the summer (high). The house Socrates described appears to be a trapezoid with the base situated toward the south taking advantage of the sun's energy during the winter while avoiding the hot summer sun.

As time progressed the next natural step was to incorporate glass into the south facing windows which would trap the solar energy creating a greenhouse effect. A house that makes use of the greenhouse effect is a passive solar design.



Materials in the house with thermal mass will absorb sunlight as it shines directly on them while passing through the windows. Thermal mass materials have the ability to absorb, store and release the heat energy from the sun. Objects with thermal mass are able to both release heat to cooler surfaces or absorb heat from warmer surfaces, which helps keep the inside temperature constant. Its pretty naïve to assume using the sun as an energy source is something new.

Saving our planet one tip at a time...

The following is a recent Energystar Facebook post: Do you use your video game console to play DVDs? Did you know that consoles use anywhere from four to seven times as much power as stand-alone Blu-ray players, and as much as 24 times the power of a stand-alone DVD player? Just something to think about before you pop in How the Grinch Stole Christmas...

I hope everyone has a happy holiday season and a prosperous new year.

Peace, Shaun Cummings

**LEED Regionalization**

*by Chris Mueller, Mueller Industries*

USGBC Newsletter Holiday 2011

The Chapter has formed a Regionalization Task Force with the intention of identifying appropriate Regional Priority Credits for inclusion in LEED 2012. The process began late this summer and will extend into early next year.

A key decision by the group was to separate the chapter area into urban and rural geographies. After receiving feedback from the membership through an on-line survey, six specific priority issues were identified. The task force recently completed their Phase 1 assignment by ranking these issues in terms of importance and delineating the geographies.

Phase 2 will involve identifying specific (bonus) credits in LEED 2012 that – when attained – will have an especially positive impact on the chapter area. This work will begin early next year but cannot be fully complete until after the final version of LEED 2012 is published.

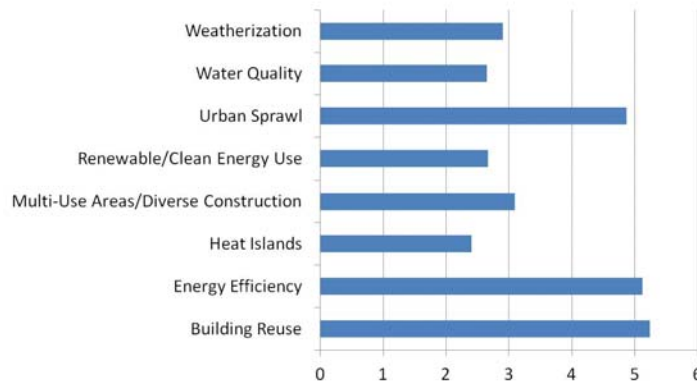
Priority issues were ranked as follows:

URBAN: Building Reuse, Energy Efficiency, Urban Sprawl, Multi-use Areas, Water Quality, Renewable Energy

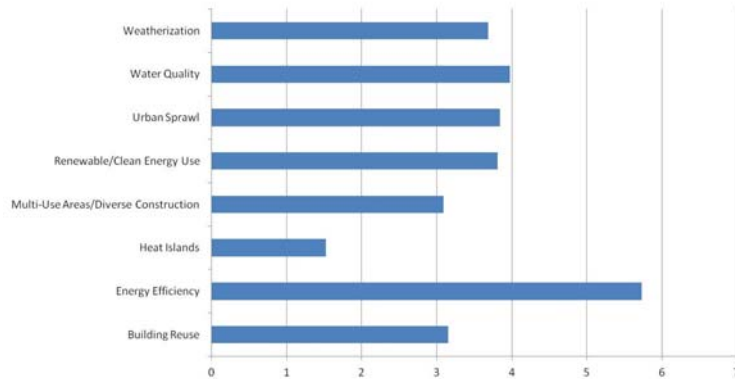
RURAL: Energy Efficiency, Water Quality, Urban Sprawl, Renewable Energy, Building Reuse, Multi-use Areas

And here are the survey results that you provided:

RELATIVE PRIORITY SCORE FOR ISSUES IN URBAN AREAS OF THE MEMPHIS CHAPTER



RELATIVE PRIORITY SCORE FOR ISSUES IN RURAL AREAS OF THE MEMPHIS CHAPTER



**Green Building Task Force**

*Reprinted from "Memphis and Shelby County Office of Sustainability Fall Newsletter."*

Mayor Mark H. Luttrell, Jr. appointed the Green Building Task Force to conduct an extensive review of local building codes and relevant technical codes to identify existing regulatory or administrative obstacles to green building, sustainable development, and adaptive reuse. The Task Force, which held its first meeting on September 20, 2011, is comprised of architects, designers, builders, developers, construction project managers, and other interested parties.

Self+Tucker Architects is serving as consultant and will assist the Task Force in conducting a best-practices review of existing model green building codes, making recommendations for the local adoption of a model green building code, and looking at any barriers in the development process.

## ***Portfolio Manager***

*Reprinted from "Memphis and Shelby County Office of Sustainability Fall Newsletter."*

The U.S. Department of Energy is providing free technical assistance to the Office of Sustainability on using Energy Star Portfolio Manager to determine the energy consumption data on several high-profile City and County Buildings. This data will be used to identify the high energy buildings and target future energy efficiency improvements. Ultimately, the Office will enter the data for all City and County buildings and consumption will be monitored on an ongoing basis.

Self+Tucker Architects is serving as consultant and will assist the Task Force in conducting a best-practices review of existing model green building codes, making recommendations for the local adoption of a model green building code, and looking at any barriers in the development process.

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