

MICHAEL F GALLAGHER

architect

Custom Breckenridge, Colorado home earns LEED® for Homes™ Gold Award for Colorado Architect Michael F. Gallagher and team.

Breckenridge, Colorado Architect Michael F. Gallagher took the lead on this custom Colorado home, working closely with the builder, interior designers and the owners to create Summit County's first LEED® for Homes™ Gold home. Utilizing environmentally responsible architectural design to create this sustainable Breckenridge custom home was made possible by assembling a dedicated team of interior designers, builder and of course the Breckenridge architect, Michael F. Gallagher.

We hope you find the following article published in the U.S. Green Building Council Colorado Chapter's January/February 2011 Newsletter informative and useful for custom home clients interested in conserving natural resources and realizing energy savings while designing their dream home or for Colorado architects who would like to learn more about creating sustainable, energy conscious, custom Colorado mountain resort homes. If you would like additional information, please do not hesitate to contact Michael F. Gallagher, Breckenridge, CO Architect via his website:

<http://www.michaelgallagher.com>



COLORADO

Newsletter

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Indoor Environmental Quality

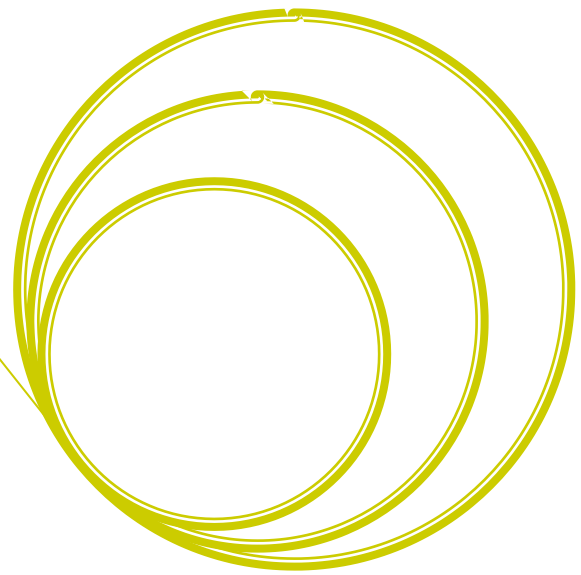


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Calling all Authors

The deadline to submit articles for the March/April 2011 Newsletter is March 10th. Please submit articles in a Microsoft Word Document to **Cyndy Snow** at csnow@wausauwindow.com

Questions, comments or suggestions? Please contact **Chris Kerlin** at ckerlin@tmcxsolutions.com

Upcoming Newsletter Themes

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Sunshine Ridge: Summit County's First LEED™ Gold Home

Amy DePierre Tindle, Associates III



From the inception, this home was destined to be built responsibly by inclination of the owners. Having worked closely with the architect, Michael F. Gallagher and the builder, Arnie Surdyk, owner of Double Diamond Construction & Property Services, on several spec homes the homeowners were already well versed with conventional building practices. When it came time to build their own future retirement home in Breckenridge, Colorado they decided to raise the bar and looked to U.S. Green Building Council's LEED® for Homes™ as their guide.

Surdyk, a newcomer to the world of green building, promptly enrolled in Colorado State University's certification course to learn all he could about green home construction. Meanwhile, Gallagher, intent on having an integrated team assembled from the very beginning, went in search of an

interior design firm for the project and met Associates III during an open house showing of their first LEED for Homes project in Cordillera, Colorado.

"This project was successful because we had a good team that was active from the beginning of the project. As the architect, I'm the first person involved and it was great to have the other team members available to help with decisions and provide guidance as soon as I began designing the home," Gallagher states. The original goal for Sunshine Ridge (aka Silver Hawk for Gallagher's design inspiration) was to reach LEED for Homes Silver certification, but with the full team gathered around the table to explore achievable credits in relation to the homeowner's objectives the home easily earned Gold certification.

"The design of any sustainable home," Gallagher claims, "begins with site design." Fortunately, he had a great piece of land with some unique attributes to work with. Concerned the view was not to the south, which usually provides for a large bank of windows and optimum passive solar gain, he instead chose to orient the main gable toward the western view and by doing so was able to utilize the large south-facing roof for a 6.3 kW Photovoltaic (PV) system and eight solar thermal panels to provide approximately 95% of the home's electrical energy, nearly all domestic hot water and a portion of the energy required for space heating.

The five bedroom 5,000 sq ft family retreat has a super-insulated building envelope. With R-34 spray foam insulation in each exterior wall and R-58 for the roof, the home only experiences 0.15 natural air changes per hour. In addition, it scored a HERS index of 29. Megan Gilman, President of Active Energies, completed site testing and confirmation as the green rater and helped ensure the entire team understood the LEED for Homes process and points items to stay on track. "The project team stayed focused on every detail of the home, from our original design charrette that included all team members, even the homeowners, through to the very end. The result was an outstandingly well-built home with quality and beauty throughout, setting an excellent example within the community," describes Gilman.

Inside, the home's fixed interior finishes were thoughtfully designed and selected with reuse, recyclability, and durability in mind. Flooring is 100% hardscape, a combination of natural pigment colored concrete and reclaimed 100 year old barn wood from Missouri. Colorado beetle-kill pine trees were cleared from the site, exchanged at the mill for processed beetle-kill lumber and used for most of the home's cabinetry, all interior doors, base and casing as well as interior railings and shelving and finished with formaldehyde free, non-toxic, low-VOC soy stain or water-based paint. Nearly all the walls were finished with a natural earthen clay plaster. Paying attention to every small detail, even the door hardware was 90% recycled (with at least 50% coming from post-consumer content) as well as recyclable.

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Sunshine Ridge: Summit County's First LEED Gold Home *Continued*

Amy DePierre Tindle, Associates III

The homeowners emphasized their desire for a comfortable family oasis; unfussy, welcoming and warm. With an extensive library of responsible sources, Associates III assisted with the selection of sustainable furnishings, accessories and linens. Highlights include natural wool area rugs, sustainably constructed upholstered furniture with feather down wrapped soy based foam cushions, case pieces made from reclaimed wood with natural protective finishes, and 100% organic latex mattresses with organic cotton linens.

"This home was a real treat to work on. The homeowners are dream clients and truly wanted to do a very responsible design, inside and out," Jill Bosshart, of Associates III, recounts. "They saw the logic behind using green interior finishes and furnishings that go well beyond the requirements of LEED for Homes. We felt we were really able to provide them with a healthy environment to live in and share with their family."

Moving outside, landscape designer Megan Testin, Neils Lunceford, Inc., notes "careful site planning, passive use of storm water and responsible irrigation design allowed us to reduce water use by 77% and helped achieve sustainability objectives for the project." The overall goal of the landscape was to promote species and plant diversity. The landscape design intended to create outdoor spaces for the family to enjoy, while respecting the existing topography. Challenges included balancing cut and fill, the mitigation of storm water, and steep existing topography. Designing at an elevation of nearly 10,000' dictated a limited plant palette which was further restricted when paired with an emphasis on fire mitigation and low water use plants. Utilizing microclimates and planting material in small groups to create natural firebreaks worked to satisfy both fire mitigation and low water use requirements.

"From beginning to end, this project has been super exciting on so many levels," Surdyk says. "A big part of successful implementation was having a solid, consistent team of subcontractors, affiliates and partners who were committed to the core. Considering that we not only achieved LEED benchmarks but surpassed much of the criteria demanded of us, the powerful combination of excellent materials, practices and people paid off."

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