

SOLSTICE
1535 LIBERTY LANE
MISSOULA, MONTANA

24.8% energy cost savings

41.3% water use savings

52% of site restored from asphalt
and concrete to native or adapted planting

LEED® Facts

Solstice
Missoula, Montana

LEED for New Construction v2.2
Certification in process

Gold Goal 42*

Sustainable Sites 11/14

Water Efficiency 3/5

Energy & Atmosphere 7/17

Materials & Resources 7/13

Indoor Environmental
Quality 10/15

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.

SOLSTICE AFFORDABLE HOUSING

Sustainable Communities for All

Solstice project demonstrates green and affordability work together

PROJECT BACKGROUND

homeWORD Inc. is a Missoula-based grassroots housing developer founded in 1994 to provide safe, healthy, sustainable and affordable housing. Solstice is homeWORD's twelfth affordable housing development, ninth Low-Income Housing Tax Credit (LIHTC) project and third mixed-use development. The Solstice project includes a mix of 34 studio, one-bedroom and two-bedroom rental apartments on the second and third floors, commercial office space named Confluence on the first floor and underground parking for residential and commercial tenants. To qualify for one of the rental apartments requires household income of less than 60% of the area median income. In Missoula, that means a two-person household earning \$28,380 per year or less qualifies to apply for a rental unit at Solstice.

homeWORD has received many awards for its innovative use of tax credit financing, excellence in affordable housing and application of sustainable design principles to their projects. Solstice-Confluence and homeWORD are the recipients of the 2011 Innovation Award for creative funding initiatives that promote affordable green building and green job creation. Solstice-Confluence is the first Montana commercial and affordable housing project to register and pursue LEED certification, the first mixed-use development in Montana to receive a grey-water permit, and the first development in Montana to combine LIHTC with New Markets Tax Credits to finance the transaction. The project has already gone through LEED review of the design phase credits, and the project is tracking at the Gold level of LEED Certification. Final confirmation of certification is expected in the Spring 2012.

STRATEGIES AND RESULTS

Site: Solstice and its sister project Equinox are built on a greyfield site that contained a large parking lot and old bowling alley on a busy intersection directly west of downtown Missoula. The project qualified for 11 out of 14 LEED site credits such as alternative transportation, community connectivity, 30% stormwater quantity reduction, and open space.

Water: One of the themes of the Solstice-Confluence project is water efficiency and restoration the water cycle, very appropriate for a site that is adjacent to Missoula's prized Clark Fork River. Low flow and flush fixtures contribute to a 41% reduction in potable water use for interior plumbing. Potable irrigation water use was reduced by over 63% by selecting native and adapted plants, efficient irrigation systems and inclusion of greywater from the buildings. The water cycle was improved by removal of the old parking lot, placing new parking underground, channeling stormwater to landscaped infiltration areas and rain gardens to treat the stormwater and recharge the Missoula Aquifer.

Energy: Efficiency measures such as improved insulation in exterior walls (R-23) and roof (R-50), high performance windows, 96% AFUE furnaces, 16 SEER cooling units, 94% efficient condensing gas boiler for domestic hot water and efficient lighting contributed to energy cost reduction of 24.8% compared to a code-compliant design, and generation of 4.5% of the annual energy use with the 22 kW solar electric array on the Solstice roof.

Materials: The old bowling alley and parking lot materials were deconstructed and salvaged, recycled or reused on site. Examples include reuse of asphalt and concrete as fill and bowling alley lanes for wainscoting and counters. The building included an average of 21% recycled materials, 40% regional materials, and over 50% FSC Certified wood.

Indoor Environmental Quality: homeWORD has a long history of being concerned about providing good indoor air quality for all tenants. The residential units are naturally ventilated with operable windows. Standard practice for their projects include interior materials that are low-emitting, low-odor products. Carpets, resilient flooring, paints, coatings, adhesives, sealants and composite wood have all been specified to meet stringent LEED requirements.

Innovation in Design: Solstice was awarded Innovation credits for achieving over 40% interior water efficiency and meeting bike network requirements. The project will also be applying for Green Education and Green Cleaning Innovation credits with the final submittal.

Homeword is committed to providing safe, healthy affordable housing using sustainable methods and promoting strong communities through housing counseling and education for those most in need.



Owner: homeWORD
 Architect: MMW Architects
 LEED Consultant: Design Balance LLC
 Contractor: Sirius Construction
 Commissioning Agent: Western Montana Engineering
 Energy Modeler: DC Engineering
 MEP Engineer: DC Engineering
 Structural Engineer: Beaudette Consulting
 Landscape Architect: Sherry Pratt Van Voorhis
 Civil Engineer: PCI Montana
 Project Building: 48,045 square feet
 Underground Parking: 17,024 square feet
 Project Site: 83,041 square feet
 Construction Cost: \$5.86 million

Photographs Courtesy of: homeWORD and Ken Justus

OUR MISSION

The USGBC Montana Chapter promotes balanced social, economic and environmental stewardship in Montana by leading and educating about green building practices that will create health and sustainable communities in which to live, work and play.



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