

Following article rewritten by Anika Hanisch of Spiritus Creative, LLC.
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SAMPLE: Draft 1- Raw text from client

What is most important about Green Building?

Green building is difficult to define because it incorporates a very wide range of environmental, community and human health considerations. Some examples include the conservation of water, energy, and raw materials; enhancement of community connections through open space preservation, trails, and proximity to community amenities; proper site location and protection of existing habitats and ecosystems; durability of materials and building methods; and the safeguarding of human health.

The recent display of sustainable building materials at the Flying-C drew much attention to the benefits of responsible material selection as a component of green building. "Green" materials will certainly add a unique flair to your home and can reduce the home's environmental impact by utilizing readily renewable materials, lower concentrations of volatile organic compounds, and in some cases, less embodied energy. Ultimately though, the most important aspect of green construction is arguably the overall efficiency of the building.

According to the Department of Energy, the operation of commercial and residential buildings accounts for 35% of all U.S. energy use and 36% of carbon dioxide emissions. When considered over the course of a building's lifetime, the effects of this operational energy drastically outweigh the embodied energy and other environmental factors of the materials used. Subsequently, a major focus of green building should be to improve operational efficiencies.

Experiments have shown that basic efficiency improvements can reduce the energy use of a home by 20 to 50%. In the case of new construction, the first aspect to consider is the design of the home. Simple passive solar design and building orientation allow the sun to enter and heat the building in winter but block the sun in the summer. A large thermal mass inside the home such as a masonry fireplace or concrete floor can capture the sun's heat and radiate it throughout the evening and night. This type of thoughtful design has no additional costs and can greatly improve the efficiency of your home.

In addition to facilitating passive heat gain, it is critical to install efficient heating systems. As we all know, winter can visit Montana any time of the year and may last for 5 months or more. Considering these weather patterns, the incorporation of an efficient boiler or furnace can save significant amounts of energy, and money too. In conjunction with a high efficiency unit it is imperative to perform extensive air sealing of all penetrations and other building envelope leaks. Without air sealing, all of the heat generated will be lost to the outside. In fact, a typical newly constructed home in Bozeman may have an excess of .35 air changes per hour. This means that all of the interior air will be replaced by unconditioned, cold, and potentially polluted air from outside or from a crawlspace every three hours! Ideally, a full air change should occur no more often than every seven hours. Given this, it is important to utilize preventative air leakage measures in combination with a mechanical ventilation system that supplies fresh air and removes toxins, dust, and odors to protect the health of the inhabitants.

Existing homes also have opportunities to reduce their energy requirements. As indicated above, air sealing and weatherization are extremely important steps to reduce the energy requirements of existing homes. However, without the presence of a mechanical ventilation system you need to ensure that adequate fresh air is entering your home. Northwestern Energy offers a free energy audit which includes an air infiltration test and suggestions for energy improvements. The contact number for their energy audits is 1-800-368-1331.

Reducing the electrical requirements of your home can also make a significant difference. Reports from the Department of Energy show that residential and commercial buildings use 65% of the electricity generated in the U.S. Installing Energy Star certified appliances or replacing incandescent bulbs with fluorescent bulbs can drastically reduce your electrical consumption.

There are numerous other opportunities for increasing the efficiency of your existing or new home. Northwestern Energy publishes a comprehensive guide to efficiency improvements called “Your Home, Energy, and You.” It can be accessed on their website www.northwesternenergy.com under Community Relations, Energy Savers Center or by calling 1-888-467-2669.

Amy Purdie is the owner of Luminous Construction Group, a sustainable building company and Community Food Coop Partner. For more information about Green Building, visit www.luminoushomes.com or call 406-522-3942.

- END Client Text -

SAMPLE: Draft 3- Revision by Firefly Print & Web

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“Green Building 101”

The recent display of sustainable building materials at the Flying-C drew attention to the benefits of responsible material selection as a component of green building. “Green” materials add a unique flair to your new home or remodeling project and can reduce the home’s environmental impact.

Whether you install insulation made from recycled denim or use paints with lower concentrations of volatile organic compounds (VOC’s), green materials offer a wealth of benefits to the environment and personal health. While these materials are gaining in popularity, the most significant impact of a green-built home is arguably the overall efficiency of the building. Over the course of a building’s lifetime, some basic low or no-cost efficiency improvements can reduce the energy use of a home by 20 to 50%.

In the case of new construction, the overall design is critical. The concepts of “passive solar design” and “building orientation” simply refer to an overall layout that allows the sun’s rays to enter and heat the building in winter, but block the sun in the summer. The term “thermal mass” refers to a large masonry fireplace, concrete floor, or other large mass that can capture the sun’s heat and radiate it throughout the evening and night.

In addition to design concepts that help regulate indoor temperature, it is important to install an efficient heating system. Winter can visit Montana any time of the year and may last for 5 months or more. An efficient boiler or furnace can save significant amounts of energy and money over the course of the home’s lifetime. Intelligent air sealing of the building envelope is also vital. Without air sealing, all of the heat generated will be lost to the outside. Finally, installing a mechanical ventilation system for the home ensures that fresh air will enter in a controlled efficient fashion.

Existing homes also have opportunities to reduce their energy requirements. Northwestern Energy (1-800-368-1331) offers a free energy audit, which includes an air infiltration test and suggestions for energy improvements. In both new and existing homes, installing Energy Star certified appliances or replacing incandescent bulbs with fluorescent bulbs drastically reduces your electrical consumption. To learn more, review the Northwestern Energy publication “Your Home, Energy, and You” available online at www.northwesternenergy.com under Community Relations, Energy Savers Center.

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SIDEBAR or PULLOUT QUOTES:

Did You Know?

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Green Building Benefits

The concept of “Green Building” incorporates wide range of environmental, community and human health considerations.

- * Conservation of water, energy, and raw materials
- * Strengthen community connections through open space preservation, trails, and proximity to community amenities
- * Proper site location and protection of existing habitats and ecosystems
- * Safeguarding of human health through improved indoor air quality
- * Durability of materials and building methods
- * Low or no-cost energy efficiency through thoughtful design