

Project Team

City of Fitchburg

Fitchburg Public Library

Engberg Anderson, Inc. - Architect

Henneman Engineering - Mechanical Engineer

Pierce Engineers, Inc. - Structural Engineer

Ken Saiki Design - Landscape Arch. & Civil Eng.

Focus On Energy - Funding partner

Sustainable Engineering Group - Geothermal Eng.

Mortenson Construction - Construction Manager



Members of the design team, City staff and Library oversight team break ground on construction.

Why go green?

City and Library staff chose early on to pursue sustainable building design for the new Library.

By using furniture and coatings with low Volatile Organic Compound (VOC) concentrations, a healthier indoor environment is achieved for library-goers.

In order to minimize operating expenses, the Library pursued a net-zero energy use building. This goal is not yet achieved, but could be once solar panels are installed on the roof.

The City has a number of initiatives related to energy use reduction and increased use of renewable energy. The Library helps to achieve these goals.

Certified and Verified

As of August 2011, the building was on track to reach a Leadership in Energy and Environmental Design certification level of Gold (LEED Gold). This program in the US Green Building Council certifies that buildings are designed and built in an environmentally responsible manner.

As part of the certification, the Library will undergo fundamental commissioning processes to verify that the building systems are performing as they were designed and the environmental benefits are actually being achieved.

Sustainability

at the



FITCHBURG
PUBLIC LIBRARY



An overview of the sustainable design features and practices at the Fitchburg Public Library.

By the numbers...

The building will use **40% less water** than traditional libraries, thanks to high effi-

The building will use **34% less energy** than traditional libraries because of a geothermal heat system, efficient appliances, and other design features.

Over **77% of construction waste was recycled** because of high attention to detail and smart planning during the construction phase of the project.

Over **22% recycled materials were used** in all of the building.

Over **23% of the materials were local**, coming from 500 miles away or less.

Over **94% of the wood use was FSC (Forestry Stewardship Council) Certified**, meaning it came from sustainably man-

No irrigation is needed after 18 months of establishing plants, thanks to native and drought-tolerant landscaping.

At a Glance...

Energy Efficiency

- Geothermal heating and cooling system reduces the energy needed for space conditioning
- Concrete deck floors insulate better than steel joist floors
- Windows are designed to let less heat pass through than standard, and overhangs let light in during the winter and less during the summer.

Water

- Native and drought-tolerant landscaping eliminates the need for irrigation after the plants take hold
- High-efficiency fixtures reduce water usage
- Rain gardens and bio-retention ponds reduce and improve the stormwater runoff from the site

Education

- A "Sustainability Section" on the upper level provides books with green living tips and information on sustainability
- Watt meters available for borrowing help homeowners watch their energy usage
- A self-guided green building features tour brochure is available



Construction recycling container for collecting metals .



Geothermal heat exchange system construction.



Stormwater is kept on-site as much as possible.