

Wooster Elementary School

Wooster, Arkansas

Architect

Jackson Brown King Architects, Inc.



Photos Courtesy of Ken West Photography

Wooster Elementary School in the Greenbrier School District is a shining example of sustainability. It is the recycling center for the community and a learning environment for its students and parents on green building. As the first school in Arkansas to achieve a LEED® for Schools Silver certification, Wooster educates while enjoying lower operating costs through energy efficiency.

Seeking LEED certification, Jackson Brown King Architects designed learning spaces with cutting-edge technology to lower energy costs. To educate on green building technique traditional learning spaces were equipped with unique features such as exposed building systems.

The lighting system maintains consistent light levels on work surfaces by supplementing the natural daylight in the spaces. During peak sunlight, the amount of energy consumed by the fixtures is reduced. The use of the Simple Saver System® by Thermal Design, took advantage of the bright white fabric of the system to increase reflectivity and to enhance the daylighting features.

The total annual energy cost for the school is \$54,633, an energy cost savings of 27% compared to the LEED® baseline. Each room has a carbon dioxide sensor to provide a healthy exchange of fresh air based on occupant need instead of square footage.

Wooster Elementary School, completed in September 2008, demonstrates Greenbrier's commitment to provide an environment for its students to become life-long learners with an emphasis on green living.



Product Information

Metal Building Manufacturer: Alliance

Roof Insulation:

Simple Saver System® by Thermal Design

Interior Insulation: CertainTeed

Gypsum: CertainTeed

Metal Studs: Marino Ware

Ceilings & Acoustical Clouds: Armstrong

LEED® for Schools Silver



Simple Saver System® by Thermal Design Enhances Green Features of Wooster Elementary

Jackson Brown King Architects used the Simple Saver System by Thermal Design, Inc. to assist in attaining Arkansas' first school with a LEED® for Schools Silver certification. Over 64,000 square feet of the Simple Saver System was installed in Wooster Elementary.

The Simple Saver System is a patented insulation liner system used for new and existing commercial, industrial and institutional buildings. It meets the energy codes for "in-place" R-values and retains these values beyond installation. The installed Simple Saver's insulation fills the purlin space with uncompressed insulation, attaining the specified R-values and increasing the thermal efficiency of metal buildings.

"We use the Simple Saver System anytime we have an exposed pre-engineered metal building" said Randy Palculict, AIA LEED AP of Jackson Brown King Architects. "The bright white fabric of the Simple Saver System increases the reflectivity enhancing daylighting features and this reflectivity helps in Green design. The system looks clean and tight along with a high R-value."

Another bonus noted Palculict, "The Simple Saver Systems reduces the Noise Reduction Coefficient (NRC). With hard concrete floors you need more sound absorption quality and the Simple Saver System provides more than a typical lay in ceiling tile". The system also provides an "instant" finish, so it minimizes the amount of materials such as drywall, painting, etc. The reduction in manufacturing, shipping, and waste removal of products helps attaining LEED points.

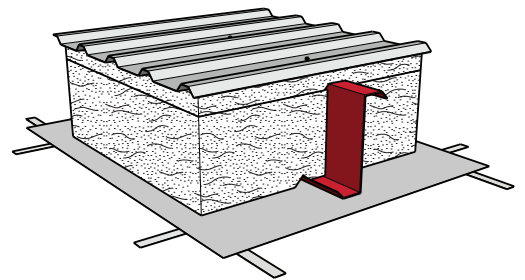
During construction, Simple Saver provides extra safety with its fall protection rating. "It makes you feel good using a system that provides extra protection for those working on the building", noted Palculict.

The benefits of using the Simple Saver Simple by Thermal Design are many. "Besides from the superior thermal performance, safety features, light reflectivity and acoustical value the system provides; architects, designers and owners are extremely pleased with the clean, bright, grid ceiling appearance. When properly installed, the Simple Saver System provides an instant finish for a variety of roof and wall types and is extremely durable in a variety of building use conditions", described Brad Rowe, National Marketing Manager of Thermal Design, Inc.

For more information on the Simple Saver System by Thermal Design visit thermaldesign.com or call 800-255-0776.



Simple Saver System®



#1 SPECIFIED HIGH R-VALUE INSULATION LINER SYSTEM FOR METAL BUILDINGS

More than just insulation:

- ★ Finishes and Decorates
- ★ Brightens Interiors
- ★ Helps Prevent Condensation
- ★ JM Formaldehyde-free™ Fiber Glass
- ★ OSHA Compliant Fall Protection
- ★ Absorbs Sound
- ★ Hot Box Tested
- ★ Healthier Indoor Air Quality

Allow us to help you keep your projects safe, achieve desired LEED® goals, and assistance obtaining a \$1.80 square foot tax deduction plus other efficiency incentives. Contact us today for specification, design assistance and a free building analysis. Let us put our 30 years of experience to work for you.

 thermal design

800-255-0776
www.thermaldesign.com

Circle #106 On Reader Service Card

Architect

Jackson Brown King Architects, Inc.
12921 Cantrell Road, #201, Little Rock, AR 72223
www.jacksonbrownking.com

Construction Team

Structural Engineer:

Engineering Consultants, Inc.
401 West Capitol, #305, Little Rock, AR 72201

General Contractor:

Dayco Construction, Inc.
30 North Road, Damascus, AR 72039

Mechanical Engineer:

Innovative Solutions Group, Inc.
136 Apple Blossom Loop, Maumelle, AR 72113

Electrical Engineer:

Lucas, Merriott & Associates
2225 West 7th Street, Little Rock, AR 72201

Project General Description

Location: Wooster, Arkansas

Date Bid: May 2007

Construction Period: May 2007 to Sep 2008

Total Square Feet: 64,259

Site: 17.89 acres.

Number of Buildings: One; 27 classrooms.

Building Size: First floor 64,259; total, 64,259 square feet.

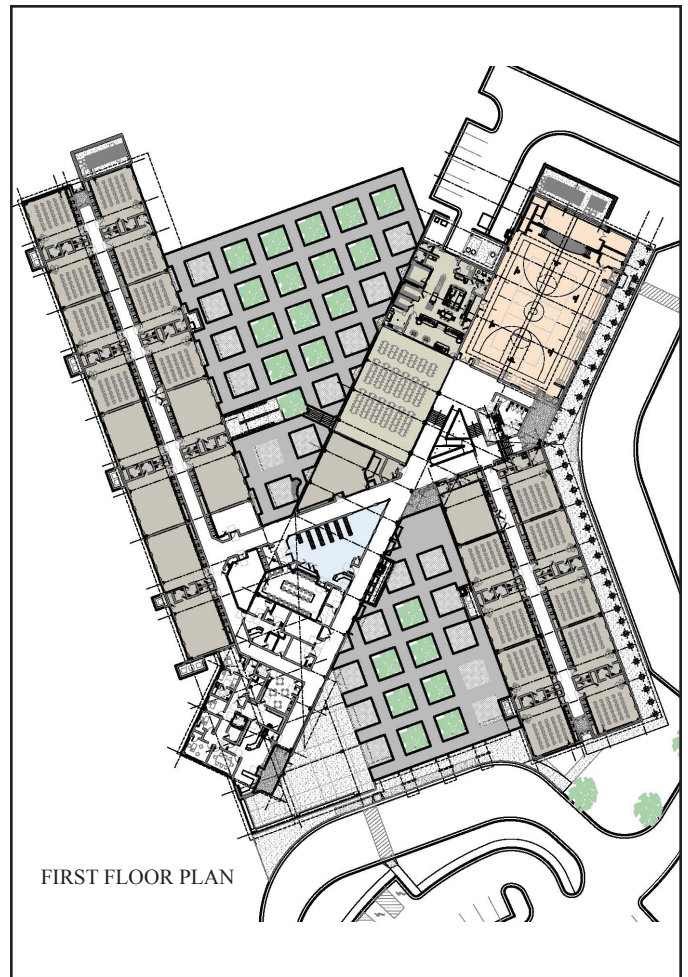
Building Height: First floor, 40'; total, 40'.

Basic Construction Type: New.

Foundation: Cast-in-place, slab-on-grade.

Exterior Walls: CMU, brick, metal wall panel. **Roof:** Metal.

Floors: Concrete. **Interior Walls:** Metal stud drywall.



FIRST FLOOR PLAN

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQ.	340,000	4.76	5.29	General conditions, bonds & insurance.
GENERAL REQUIREMENTS	161,521	2.26	2.51	Allowances, engineering & testing, change orders.
CONCRETE	676,867	9.48	10.53	Reinforcing, cast-in-place, polished and stamped concrete.
MASONRY	380,000	5.32	5.91	Masonry pre-cast.
METALS	84,480	1.18	1.31	Structural steel.
WOOD, PLASTICS & COMPOSITES	116,484	1.63	1.81	Rough carpentry, mill work.
THERMAL & MOISTURE PROTECTION	128,245	1.80	2.00	Waterproofing
OPENINGS	517,550	7.25	8.05	Doors & frames, entrances, storefronts, & curtainwalls.
FINISHES	1,319,279	18.48	20.53	Metal framing, drywall, acoustical treatment, flooring, painting & coating.
SPECIALTIES	61,301	0.86	0.96	Sun shades, toilet accessories & partitions.
EQUIPMENT	247,061	3.46	3.85	Kitchen, gym.
SPECIAL CONSTRUCTIONS	1,048,142	14.68	16.31	Pre-engineered building.
FIRE SUPPRESSION	112,678	1.58	1.76	Water-based fire-suppression system.
PLUMBING	300,000	4.20	4.67	—
HVAC	542,889	7.61	8.45	—
ELECTRICAL	1,102,100	15.45	17.15	—
TOTAL BUILDING COSTS	7,138,597	100%	\$111.09	
EXISTING CONDITIONS	613,601			Site preparation.
EARTHWORK	33,551			Erosion control, soil treatment.
EXTERIOR IMPROVEMENTS	371,720			Bases, bollards, & paving, irrigation & planting, improvements.
UTILITIES	519,402			Utilities, sewage.
TOTAL	8,676,871			(Excluding architectural and engineering fees)

UPDATED ESTIMATE TO FEBRUARY 2011: \$129.05 PER SQUARE FOOT

Regional Cost Trends								
<i>This project, updated to February 2011 in the selected cities of the United States.</i>								
EASTERN U.S.	Sq.Ft. Cost	Total Cost	CENTRAL U.S.	Sq.Ft. Cost	Total Cost	WESTERN U.S.	Sq.Ft. Cost	Total Cost
Atlanta GA	\$148.24	\$9,525,568	Dallas TX	\$148.24	\$9,525,568	Los Angeles CA	\$190.09	\$12,215,141
Pittsburgh PA	\$162.19	\$10,422,092	Kansas City KS	\$153.47	\$9,861,765	Las Vegas NV	\$172.65	\$11,094,486
New York NY	\$209.28	\$13,447,861	Chicago IL	\$186.60	\$11,991,010	Seattle WA	\$184.86	\$11,878,944

For more information on this project and similar projects visit www.dcdarchives.com