

ENERGY STAR Building Design Profile

Red Hawk Elementary School
Erie, CO 80516



The new 71,000 SF Red Hawk Elementary is a vibrant place for kids to learn. The sustainable design centers around a central space connected to all parts of the school which allows for interaction amongst students and teachers. Sustainable features include daylighting, displacement ventilation, heat pumps and recycled materials.

One of the best benefits of using Target Finder is that in less than five minutes you can see, through numeric values, how a building design will perform in relation to a baseline building.

Talking Points:

- Projects that achieve the Designed to Earn the ENERGY STAR certification are designed to reduce energy and CO₂ emissions.
- It was important that our project achieve Designed to Earn the ENERGY STAR because it signals to the market that the project is intended to perform in the top 25% of the nation's most energy efficient buildings. **RB+B Architects** is also helping the environment by delivering a low energy design to our client, which in turn sets the stage for operating the building to actually earn the ENERGY STAR label. ENERGY STAR buildings have a proven track record and yield average annual energy savings of 30 percent.
- Projects that achieve the Designed to Earn the ENERGY STAR also promote future financial benefits from reduced energy costs over the life of the building.
- Target Finder was helpful in evaluating how various design strategies affected the energy estimates for the project.

Suggested Details:

- The projected annual energy and CO₂ savings of the design is **62 percent** as compared to the median building.
- The estimated total annual energy savings for this project is **7,402,953 kBtu** with an estimated cost savings of **\$ 46,566**.
- **Sustainable features include:**
 - Siting of the building to maximize commuting from nearby neighborhoods (children ride their bikes to school)
 - Proper orientation of classrooms to maximize daylight
 - Displacement ventilation coupled with ground source



Architect of Record:
RB+B Architects

Engineering Firm:

- Structural Engineer: JVA, Inc.
- Mechanical Engineer: Shaffer-Baucom Engineering Consultants
- Electrical Engineer: RJ McNutt & Associates
- Civil Engineer: V3 Consulting
- Landscape Architect: The Birdsall Group
- Acoustician: Geiler & Associates
- LEED Consultant: Institute for the Built Environment
- Information Technology: DL Adams & Associates
- Kitchen: KitchenTech

Building Owner:

St. Vrain Valley School District

Design Energy Rating:

100

Percent Energy and CO₂ Reduction*:

62

Design Year/ Estimated Occupancy Date:

August 1, 2011

Space Type:

K-12 School

Floor Space:

71,157 sq ft

Estimated Energy Use Intensity:

21 kBtu/sf/yr (Site)

Estimated Total Annual Energy Use:

1,601,204 kBtu/yr

Estimated Annual Energy Cost:

\$ 28,087

- heat pumps, as well as radiant floor heating
- Reused materials (old gym flooring from a nearby high school is used as wall paneling in the cafeteria)
- Utilized recycled materials
- Materials with no or low-VOCs
- Environmental learning spaces integrated into the design of the building and the site.
- Minimal turf grass and native landscaping to reduce water usage.
- Low flow fixtures
- Specification of sustainable materials
- Super insulated building envelope
- Thermally efficient window glazing

For More Information

Contact Jason Kersley at
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*Percent Energy and CO₂ Reductions are based on comparison to a median building of similar type.

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