

Mission

We strive to create high quality, timely, environmentally conscious and cost-effective engineering solutions.

Mechanical Services

- Heating, Ventilating, Air Conditioning (HVAC) system design
- Whole Building Energy Modeling
- LEED IAQ and EA Credits
- Manual J & N Heat Loss
- ASHRAE 90.1 & 62.2
- REScheck and COMcheck
- System Design
- Duct Sizing
- Equipment Specification
- Mechanical Drawings
- Mechanical Specifications
- Pump Sizing



Heat Recovery Ventilation (HRV) Unit

Facilities

The Redleaf Consulting, PLLC office is located on the 2nd floor of the Health and Fitness Building in Big Sky, MT. This building was recently completed and awarded LEED Gold Certification!



Redleaf Consulting, PLLC performed the whole building energy simulation and the Heating, Ventilation, and Air Conditioning design for this building. Heating and cooling are provided via ground source heat pumps that capture free energy from the Big Sky Sewer and Water District treatment plant ponds. The simulations show that this building's energy cost/consumption is 45.8% less annually than a standard baseline building! Please stop by anytime and we'd be happy to give you a tour.



Redleaf Consulting, PLLC

32 Market Place, Ste 4
P.O. Box 161085
Big Sky, MT 59716-1085

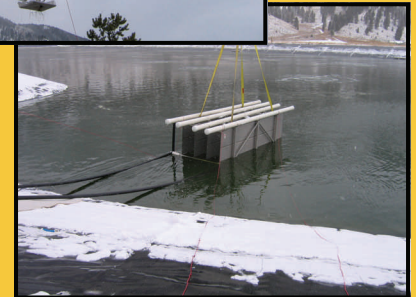
Phone: 406-995-2996
Fax: 800-521-4840
E-mail: philipk@redleaf-consulting.com
www.redleaf-consulting.com



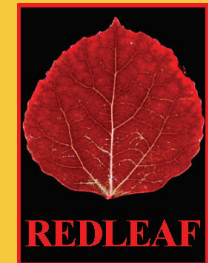
Redleaf Consulting, PLLC

Effective Engineering Solutions

► Mechanical Engineering Design Services



Lake Plate Heat Exchangers
for Geothermal Source Heat & Cooling



Tel: 406-995-2996

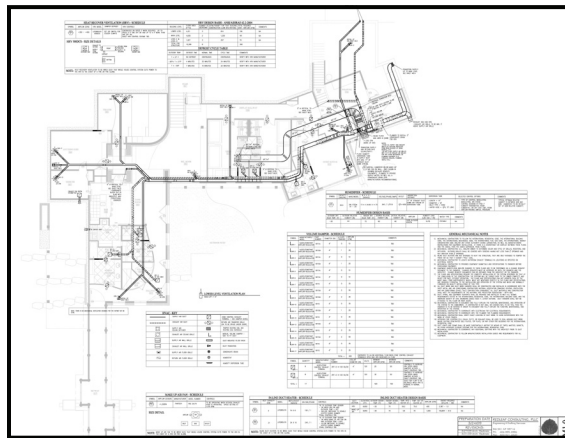


Mechanical Engineering Design Services

Residential

Redleaf performs complete Heating, Ventilating, and Air-Conditioning (HVAC) designs for residential structures. Working directly with the owner, architect, and builder; Redleaf will generate fully engineered mechanical plans and specifications that meet the established requirements. The plans and specifications are then used for bidding and construction. Redleaf implements a change request system so that the HVAC subcontractor can offer input into the design based on their field experience.

Redleaf has experience with standard HVAC systems as well as more efficient but less standard *Geothermal* and *Heat Recovery* systems.



Residential Ventilation Layout

(Floor Plan by Reid Smith Architects)

Commercial



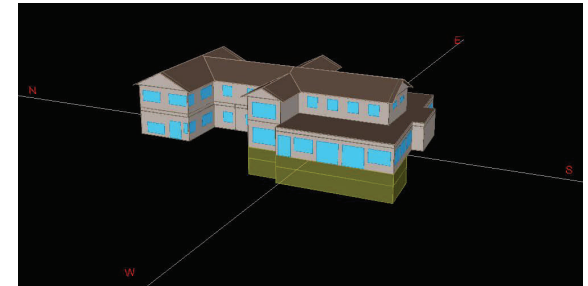
Big Sky Health and Fitness Building

LEED Gold

A **Redleaf** licensed Professional Engineer (PE) can serve as the mechanical engineer of record for commercial HVAC projects. Commercial projects can often be more complex than residential projects. This is because the building occupancies and uses may vary significantly. Redleaf will engineer HVAC systems to meet the specific needs of each commercial building occupancy and use.

Sustainable

Redleaf believes in implementing sustainable building practices. Properly sized and designed HVAC systems offer a significant energy savings over the life of the system. Redleaf can help determine the end use energy costs associated with new or existing buildings by creating a whole building energy model. This model can be used to perform cost benefit analyses that aid in construction decision making during the design phase of the project.



eQuest Whole Building Energy Model

Redleaf Consulting, PLLC

32 Market Place, Ste 4
P.O. Box 161085
Big Sky, MT 59716-1085

Phone: 406-995-2996

Fax: 800-521-4840

E-mail: philipk@redleaf-consulting.com

www.redleaf-consulting.com