

BioBased Corporate Office

*Location: Fayetteville, Arkansas
Owner: BioBased Systems, LLC
Project Cost: \$6.6M Total
\$1.7M MEP
Completion: September 2008*



Biobased, Inc. is an OEM provider of an environmentally-friendly, foam spray insulation. Our engineers provided various LEED and design services for their new 30ksf, two-story LEED Silver Certified company headquarters in south Fayetteville. The building housed a mixed occupancy with approximately 6ksf dedicated to research laboratory space with the remaining set aside for administrative offices and common areas.



The HVAC system consisted of a 180 ton Multi-Zone VAV system with CO₂ and outside air monitoring. Heating was provided by three staged modulating-condensing type high efficiency boilers. Custom “fast-acting” VAV units were designed for the laboratories to provide make-up air and maintain room pressure control in concert with 15 lab hoods. Hoods were equipped with manifold nitrogen, vacuum, and compressed air systems. One hood was designed for perchloric acid duty featuring a complete duct washdown system.

Pinnacle Engineers provided LEED integration services to achieve design points for: Light Pollution Reduction, Water Use Reduction, Outdoor Air Delivery Monitoring, Increased Ventilation, Construction IAQ Management Plan, Indoor Chemical & Pollutant Source Control, Controllability of Systems – Lighting, and Controllability of Systems – Thermal Comfort, Daylight & Views, Thermal Comfort, and Innovation in Design. Our work also included energy modeling and ROI cost information to support owner decisions related to laboratory hoods and HVAC system types.

