



Celebrating 50 years of service 1951-2001

THE NEWS DIFFUSER

Focus on Green Design

LEED™: Leadership in Energy and Environmental Design

What is green, environmentally responsible, healthy, and energy-efficient? It could be a LEED™ Building if it meets the U.S. Green Building Council (USGBC) Rating System criteria. LEED is the USGBC's sustainable design building rating system for assessing new and existing commercial, institutional, and high-rise residential buildings. As implied by its name, LEED's primary goals are reduction in energy use and environmentally conscious design. It is a comprehensive, voluntary design and assessment tool created for the U.S. market to help those in the building industry improve performance and help measure the sustainability of their projects.

The LEED Rating System involves owners, contractors, architects, engineers, occupants, and building officials. The LEED program is structured to involve the entire owner/design team throughout the design, construction, and operation of a building to achieve a green design. Green design includes design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants, addressing:



- ✓ Sustainable site planning
- ✓ Safeguarding water and water efficiency
- ✓ Energy efficiency
- ✓ Conservation of materials and resources
- ✓ Indoor environmental quality.

Many of the LEED design guidelines are not new to Bridgers & Paxton. For many years we have been designing sustainable buildings with an eye towards:

- Indoor environment quality
- Energy-efficient HVAC and lighting
- Water-efficient plumbing
- Commissioning
- Measurement and verification

We recognize that further improvements can be made in partnership with owners, architects, and contractors to provide energy-efficient, environmentally friendly, and physically comfortable buildings. Rick Downing, P.E., is the LEED specialist at B&P. If you would like more information on the LEED Rating System, give us a call or visit the LEED website at www.leadbuilding.org.



Bridgers & Paxton Celebrates 50th Anniversary



On May 4, 2001, Bridgers & Paxton celebrated our 50th anniversary. Robert Hopper Jr., President and CEO (center), along with all the Board of Directors, welcomed Frank Bridgers (left) and Don Paxton (right), the founders of the company. Their presence at the party played a major role in making the celebration a huge success.

Phoenix Office
Has Moved to:

11209 North Tatum Blvd, Ste 160
Phoenix, Arizona 85028

Phone & fax numbers remain the same:

602-996-6399 (phone)
602-996-3267 (fax)



"The capital of the firm is the knowledge of your people..." Martin H. Reiss, P.E.



New Member Elected
to B&P's
Board of Directors

John F. Heck IV, P.E. has become a shareholder in Bridgers & Paxton Consulting Engineers, Inc. He was elected to the Board of Directors and became a Vice President at the July Board of Directors' meeting. John is a 1986 electrical engineering graduate of California Polytechnic State University and has been with Bridgers & Paxton since December 1998. He is the electrical engineer for the \$25-million Student Union Building project at UNM scheduled for completion in 2002 and the \$8.7-million UNM law school addition. He is currently working on the renovation project at the old Albuquerque High School site.



Hats Off to Recent Graduates



Paul Getz (Phx)
AAS in CAD Technology
Johnnie Garcia (Alb)
Associates Degree in Architectural
Engineering/Drafting
Ruben Serrano (Phx)
Bachelors in Business Administration



Integrated Engineering
+ Sustainable Design
Good Building Design

IE + SE = GBD



B&P Congratulates
New B&P
Professional Engineer

B&P congratulates Richard (Rick) T. Downing, P.E. of the Albuquerque office for successfully completing all the requirements for licensure as a professional engineer in the State of New Mexico. Rick is a 1974 Ohio State University architectural graduate. He previously worked for B&P from 1976 to 1986 and rejoined the B&P team in 2000. He was recently part of the mechanical systems design team for a major upgrade to the Philips Semiconductor manufacturing facility in New Mexico. Rick is the primary project engineer for B&P's open-end contract at the WIPP site. He is currently working on obtaining his LEED certification.

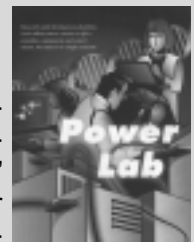


Khaled Taiba, P.E.
Becomes
U.S. Citizen

Khaled became a U.S. citizen on June 15, 2001. We are proud of this accomplishment in his life. Khaled is a mechanical engineer in the Phoenix office.

Learn About
"Power in the Lab"

William Herbst and John Heck, B&P principals and electrical engineers, co-authored the article "Power in the Labs" published in the Fall 2001 Pure Power Magazine, a supplement to Consulting-Specifying Engineer. Look for the article at the following website: www.csemag.com/purepower.asp. Following is an excerpt from the article:



High Power Computing

The Strategic Computing Complex at the Los Alamos National Laboratory uses massively paralleled computers to enable modeling of dynamic events such as the weather or forces inside an explosion. Computer calculations can take hours to run.

In the summer Los Alamos is highly susceptible to lightning that causes short-duration (five electrical cycles) overhead-line disturbances. The solution was to install a rotary uninterruptible power-supply system with a 12-second ride-through that eliminated 95% of the outages disrupting computer operations. (See the article "Power in the Lab" for more information.)

Energy Efficient Design

United We Stand



Bridgers & Paxton proudly supports the relief efforts of the American Red Cross in the wake of the September 11 terrorist attack on our nation.

B&P employees contributed \$2525 which was matched by the Board of Directors for a total contribution of \$5050.

All of us --
Standing together
In support of freedom.



GSA Revises SF254/255

The General Services Administration reports that SF 330 will replace forms SF 254 and SF 255 possibly as soon as the end of this year. The new form will replace the existing forms which have been in use by architects and engineers pursuing government contracts for over 25 years. The SF 330 is supposed to be published in the Federal Register for comments sometime in November or December. Watch for the new SF 330 at the following website and submit your input so that this form can better represent experience and qualifications of submitting firms.

<http://listserv.access.gpo.gov>



2001

Giants Report

Bridgers & Paxton is ranked in the Top 100 mechanical/electrical consulting engineering firms in the nation by *Consulting-Specifying Engineer*, August 2001 edition, for the third consecutive year. The ranking of engineering firms is based on mechanical/electrical billings from the last fiscal year.

B&P was also #37 in *Building Design & Construction* magazine's 25th annual listing of top architecture, engineering, and construction firms in the nation.

Providing safe and comfortable environments for human occupancy in buildings is the goal of every project designed by Bridgers & Paxton. In addition, we endeavor to create indoor environments with minimal effect on our natural environment. Bridgers & Paxton's engineers investigate economically feasible techniques to make our projects as energy-efficient, and therefore as environmentally friendly, as possible. Energy-efficient considerations include solar energy, fossil-fuel-generated energy-use alternatives, non-chlorofluoro hydrocarbons for cooling, natural-lighting opportunities, occupancy sensors, lighting-control systems, and daylight sensing.

Solar energy can be utilized in both active and passive forms in buildings. Orientation of buildings with regard to solar concerns is also an important factor in the building's overall energy use.

1998

Altura Office Building



New 107,465 square-foot office complex utilizing GHP system.

The use of a geothermal heat pump (GHP) system meets several of the LEED credit categories. It is kind to the **environment** by using a renewable source of energy – the earth. The system is **energy-efficient**; excess heat energy is stored in the earth for use at a later date. Using geothermal energy decreases demand on fossil fuels at power plants thereby reducing the emission of pollutants into the atmosphere. The system is **water-efficient**. Water taken from the ground is returned to the ground.



1954

Simms Building

One of the first high-rise buildings to utilize a GHP system.

The first GHP system that B&P designed was for the Simms Building in 1954 long before the term sustainable design was coined and 40 years before LEED was established to promote sustainable design practices. B&P has recently designed two offices buildings with GHP systems: the Altura Office Building in Albuquerque and Plaza Entrada in Santa Fe.

Through the years, Bridgers & Paxton has continually been a leader in the design of energy conserving systems and the use of the latest technology in an effort to reduce overall building energy use. In the 1970s and 1980s, we were a national leader in the design and implementation of solar-energy systems. In recent years, we have continued to be a leader in the energy-conservation field such as the use of thermal-energy storage, cogeneration, and efficient CFC replacements for building cooling systems.

1970
Energy Conservation
1980
Intelligent Buildings
1990
Sustainable Design
2001
Green Buildings

Today, Bridgers & Paxton is participating in the LEEDs Green Building Rating System. Bridgers & Paxton will continue to design safe and comfortable indoor environments while maintaining safe, clean outdoor environments.

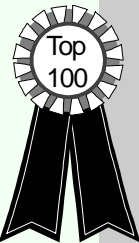
1956

Solar Building



1st completely solar-heated commercial building in the world.

Minimizing energy use from fossil-fuel-generated sources through a variety of energy-conservation techniques helps reduce the use of our natural resources and the resultant pollution created by burning fossil fuels.



Sandia National Laboratories - Albuquerque
Distributed Information Systems Laboratory (DISL)

Bridgers & Paxton is providing MEP design for this new 70,400-square-foot research facility tasked with the development of information systems for defense programs. The facility is a mix of private offices, laboratories, collaborative areas, and demonstration areas for approximately 130 staff members.

An independent third-party consultant documented and managed the LEEDs Green Building Rating System process for this project. All disciplines worked together with the consultant who gathered and then modeled sustainable design input from all parties involved and prepared a report with recommendations for optimum "green" design. B&P's mechanical system design resulted in the single highest point total of any energy-efficient feature of this building. Although the building did not obtain LEED certification, the process ensured the owner that the best possible sustainable building was designed.

The Department of Energy is requiring that all new buildings follow the LEED guidelines regardless of whether or not the buildings are registered or ever achieve LEED certification. Bridgers & Paxton also followed the LEED guidelines on the Sandia Underground Reactor Facility (SURF) project. Rick Downing prepared a sustainable design report for the new SURF facility (approximately 10,000 gross square feet). This high-security facility has an estimated construction cost of \$10 million. Part of the design process was a design charrette at the beginning of the project to gather input from all parties involved into a report that guided design of this facility to produce the "greenest" building possible.



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