

***Russell M. Keeler, P.E.***  
***Curriculum Vitae***  
***May, 2004***

- Education* B.S. Environmental Engineering, California Polytechnic State University, 1972
- Professional Registrations* Registered professional engineer in California, Colorado, Connecticut, Delaware, Florida, Maryland, New Jersey, New York, Pennsylvania, Wisconsin, LEED 2.0 Accredited Professional, NCEES.
- Overview* Mr. Keeler combines technical competence, highly developed communications skills and over 30 years experience in HVAC project design and over 20 years managing a mechanical consulting engineering firm. He recognizes that a technical solution to a design problem, no matter how well conceived, remains merely an idea until the client, be it Architect or Owner, understands the implications of the solution and directs the implementation to proceed. He is acutely aware of the need to produce the design within both time and monetary limits.
- Highlights of Career* Mr. Keeler's range of problem solving experience and his intellectual curiosity are key to his skill as a building systems engineer. Well-rounded in experience, his work includes commercial, industrial and institutional projects. He has served as design engineer, project manager, construction coordinator, marketer and principal. Several of his designs have been pioneering efforts, or have shown unusual insights into the particular design problem.
- Management Experience* Mr. Keeler has spent much of his career in a management role. He has led MEP teams ranging in size from 5 to 30 engineers. In these positions, he has been responsible for both the technical content of the team's design as well as for recruiting and building staff.
- Legal*
- Dispute between Mechanical Contractor and Design Engineer for incorrect bid on Casino HVAC system in Design/Build project. Contractor based bid on Engineer's drawings that inadequately translated performance design documents. Provided interpretation of the intent of the specification relative to Engineer furnished design.
  - Demonstrated that fire alarm company was not responsible for sprinkler system freeze in building where temperature was being monitored.

- Evaluated air conditioning system design in mall to determine whether mall operator installed modifications were necessary to eliminate cold temperatures in retail area adjacent to subway entrance. Demonstrated, by field test, that mall operator proposed modifications were both unnecessary and incapable of solving problem.
- Testified to impact of lack of wall and roof insulation on the annual heating cost of industrial building in real estate tax assessment dispute.
- Demonstrated, through calculations, field temperature measurements and general testimony that mold and mildew in seafront hotel was not caused by improper heating and air conditioning system.
- Testified that Consulting Engineer's swimming pool heating system design was not a cause for cloudy water in a pool, a contributor to a drowning.
- Evaluated mountain condo heating and air conditioning system for capacity. Showed that installed system was undersized and improper design for the application.
- Evaluated residential hot water boiler for potential for generating carbon monoxide fumes in carbon monoxide poisoning. Proved through tests that the boiler was faulty.
- Evaluation of air conditioning system filtration installation for possible cause of postoperative infections.
- Reconstruction of causes for natural gas and fuel oil explosion at heating hot water boiler in residence.
- Evaluation of campus central HVAC automation system for energy conservation potential; dispute centered on delay and lost energy savings claims.
- Evaluation of causes of high-pressure induction unit freezes at perimeter of high-rise office building. Lack of heat led to eventual rupture of sprinkler piping.
- Review of causes of fan shaft deterioration and failure.
- Investigation of causes of gas explosion in fast food restaurant.
- Comments on behavior of Testing and Balancing contractor employee in alleged fume matter related to testing of exhaust fan.

*Representative  
Projects*

**Owner's Representative**

- Stadium Lofts Condominium, Denver, CO
- San Luis Valley Regional Medical Center, Alamosa, CO

**Renovations**

- Centennial Building, Colorado Capital Facilities Complex
- Public Ledger Building, Philadelphia

**Laboratory/Electronics**

- Alpha Industries
- SmithKlineBeckman

**Energy Conservation**

- Blue Cross/Blue Shield Energy Program
- New York University Medical Center

**Peer Reviews**

- Review of Coors Field mechanical design
- National Wildlife Art Museum, Jackson, WY.

**Cogeneration/Alternate Energy**

- Northwestern Institute of Psychiatry, PA
- Intercounty Hospitalization Plan, PA

**Education**

- Alameda High School, Lakewood, CO
- Plymouth Whitmarsh High School, PA

**Commercial**

- Omni Hotel, Broomfield, Colorado
- Independence Plaza, Denver, CO

**Dehumidification**

- Hill Haven Rehabilitation Center, Fort Meyers, Florida
- Southern Shores Hotel, Myrtle Beach, South Carolina

**Criminal Justice**

- Youthful Offender system, Pueblo, Colorado.

**Campus Piping**

- Youthful Offender System, Pueblo, Colorado
- Philadelphia Navy Yard, Philadelphia, Pennsylvania

**Airports**

- Denver International Airport, Denver, Colorado
- Philadelphia International Airport

**Cultural Facilities**

- Coors Field, Denver, Colorado
- National Wildlife Art Museum, Jackson, Wyoming

**Higher Education**

- Hill Hall, Colorado School of Mines, Golden, CO (lab)
- Wharton School of Business, University of Pennsylvania

**Religious Facilities**

- Cherry Hills Community Church, Highlands Ranch, Colorado
- Faith Bible Chapel, Arvada, Colorado
- McLean Bible Church, Vienna, Virginia

**Telecommunications**

- Navidec, Englewood, Colorado
- Exodus, Westminster, Colorado

**Waste Water**

- Wissahickon Valley Treatment Plant, Ambler, PA
- Lititz Treatment Plant, Lititz PA

*Awards*

ASHRAE Region IX 1999 First Place Technology Award, Youthful Offender System, Pueblo, Colorado  
Consulting Engineer's Council of Colorado 1999 Engineering Excellence Honor Award, Youthful Offender System, Pueblo, Colorado  
Owens Corning Energy Conservation Award, 1980, Industrial Category

*Publications*

"Air Conditioning System of the Future," The Construction Specifier, January 2002  
"Chilling in Style," Engineered Systems, May 2001  
Moisture Control in Buildings, ASTM, 1994, 2005. (Author of chapter on HVAC systems)  
Replace DX with Thermal Storage," Heating, Piping, Air Conditioning, August 1990  
"Energy Conservation in Health Care Institutions," Philadelphia Blue Cross/FEA, July 1976.

*Professional Affiliations*

American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)  
American Council of Engineering Companies  
University of Denver Engineering School Advisory Board

*References*

Bruce Ficken, Esq.  
Pepper Hamilton  
Eighteenth and Arch Streets  
Philadelphia, PA 19103-2799  
215-981-4038

Christopher Lee, Esq.  
Jacoby Donner  
1515 Market Street  
Suite 2000  
Philadelphia, PA 19102

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Carl Tannenbaum, Esq.  
Tannenbaum and Chanin  
1515 Market St. Suite 1000  
Philadelphia, PA 19102  
215-523-5300

*Contact*  
*Information*

Russell M. Keeler, P.E.  
1153 Bergen Parkway, Suite M, #301  
Evergreen, CO 80439  
303-670-4430  
303-670-5029 (fax)  
303-921-8371 (cell)  
Email: russ@chasonenergy.com