

WILLIAM H. CLARK, II, PE
Mechanical, Electrical and Lighting Engineer

Years of Professional Experience: 16

Education:

BS/Mechanical Engineering - 1978/University of Texas at Austin, Engineering Scholar
United States Naval Academy - 1974-1976

Professional Affiliations:

Professional Engineer - Texas
American Society of Mechanical Engineers (ASME), Member
Chairman, ASME Emerging Technologies Committee
American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE),
Member
Illuminating Engineering Society (IES), Member
Technical Calculations Committee, IES
Technical Advisor - Home Energy Rating Systems Council
Technical Advisor - Building Environment and Thermal Envelope Council
Marquis Who's Who in the Southwest, 1995
Directory of Scientists and Engineers with Disabilities, 1995, American Association for
the Advancement of Science

Related Professional Experience, Mechanical Engineering and Design:

- **Texas LoanSTAR Program**
 - * Design review of twenty projects funded by the State of Texas Institutional Conservative Program moneys
- **Small Hospitals Energy Management Program**
 - * Final report to the Texas Governor's Energy Office on the Small Hospitals' Energy Management Program
- **Wilbarger County Hospital - Vernon, Texas**
 - * Design of three energy conservation projects funded by SHEMP
- **Austin Independent School District - Austin, Texas**
 - * Major HVAC Renovation Projects at Lamar, Burnet and Johnston High School Athletic Facilities
 - * Complete HVAC retrofit to ground source heat pump systems at Brooke, Becker, and Pease elementary schools
- **St. David's Hospital - Austin, Texas**
 - * Energy Audit of hospital including electrical M&O's and ECRM's
- **Howerton Eye Clinic - Austin, Texas**
 - * HVAC design
- **Stephen F. Austin Building - Austin, Texas**
 - * Fire alarm system design
- **Texaco Research Facility - Austin, Texas**
 - * Design of dehumidification system for research laboratory

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Related Professional Experience, Electrical Engineering and Design:

- Olin E. Teague Veterans' Center - Temple, Texas
 - * 300-Bed Replacement Facility - lighting, power and signals design and calculations
- Austin Independent School District - Austin, Texas
 - * Brook, Becker and Pease Elementary schools - power design
 - * Lamar library and Brooke Gym - HVAC ground loop renovations
- Smithville Hospital Authority - Smithville, Texas
 - * Power and lighting design and calculations
- Central Texas College - Killeen, Texas
 - * New Science and Nursing Building - electrical design

Related Professional Experience, Lighting Design:

Mr. Clark has extensive lighting design experience,. He has recently completed lighting design work on the following projects for ORA:

- Olin E. Teague Medical Center - 300 Bed Replacement Facility - Temple, Texas
- Central Texas College - Laboratory and Nursing Building - Killeen, Texas
- Smithville Hospital - New Freestanding Acute Care Facility - Smithville, Texas
- Brackenridge Hospital Specialty Care Center - Austin, Texas
- Austin Presbyterian Theological Seminary - Austin, Texas

Publications:

- "Lighting Design", proceedings for the symposium on Improving Building Systems in Hot and Humid Climates, 1992
- "Lighting Calculations", proceedings for the Texas Association of Energy Engineering Conference - Dallas, Texas 1993
- Lone Star Magazine of the Texas Association of School Boards, quarterly technical article on energy conservation
- Feature articles on energy conservation for the Austin Skyliner, the Texas Hospital Association magazine and other publications
- Daily energy conservation pointers and tips for the Austin American-Statesman and NLT Log
- "Energy Conservation in Existing Buildings", 400-page textbook for Business News Publishing Company

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- Hot and Humid Climates Building Symposium - Dallas, Texas 1994
 - * "Computerized Duct Design"
 - * "Energy Conservation Analysis"
 - * "Micro-Management of Lighting Controls Projects"
- "HVAC Designer's Manual," 400-page textbook for Business News Publishing Company (work in progress)
- "Electrical Engineering Design Guide," textbook for Business News Publishing (work in progress)
- Other technical reports on geothermal energy use, including 4 published in the proceedings of the 1994 Intersociety Energy Conversion Engineering conference, 1 in the proceedings of the annual meeting of the Japan Society of Mechanical Engineers 1994, and 1 in the proceedings of the Russian Illuminating Engineering Society
- "Dehumidifying a School Library," Engineered Systems, April 1994
- Daily Energy tips on KFON AM radio - Austin, Texas

Computers and Software:

- Residential Energy Analysis Program, a software application to calculate annual and peak building loads.
- Lighting Calculations Program, a database application to determine lighting conditions by the IES zonal cavity method.
- Electrical applications programs to calculate voltage drop, perform short circuit and coordination analysis, determine savings from lighting controls and motor sizing energy conservation projects.
- Computer Slide Show, using a spreadsheet-based computer program. Presented at the Texas Association of Hospital Engineers convention in 1992 on the Small Hospitals' Energy Management Program (SHEMP) of the Texas Governor's Energy Office.
- Technical Assistance Reports, developed equations used in a spreadsheet to evaluate energy conservation projects for the second cycle of the SHEMP program.