



**SYSTECH FIRE PROTECTION LLC**  
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## ***DALE R. WHEELER, P.E.***

### **SPECIALTY AREAS**

- Fire Protection System design, installation, maintenance, operation, failures:
  - Fire detection
  - Smoke detection
  - Fire alarm
  - Central Station
  - Sprinkler systems – wet pipe, dry-pipe, pre-action, mist
  - Fire suppression systems
  - Smoke control
  - Sprinkler leakage and water damage
- Fire and Smoke Barriers
- Building Code, Life Safety Code, and Fire Code Compliance
- Fire Hazard, Building Materials, Fire Resistance Ratings
- Fire Cause and Origin
- Vehicle Fire Investigation
- Arson
- Human Behavior in Fire Conditions
- Means of egress, egress signage, emergency lighting
- Fire Modeling

### **ACADEMIC BACKGROUND, MEMBERSHIPS, & AWARDS**

- B.S., Fire Protection and Safety Engineering, Illinois Institute of Technology, 1974
- Basic Code Enforcement/Building Inspection, Building Officials and Code Administrators (BOCA)
- Member-National Fire Protection Association (NFPA)
- Member-Health Care Committee, NFPA
- Member-Society of Fire Protection Engineers (SFPE)
- Member-Fire Science Advisory Committee, Northern Virginia Community College
- Instructor-Fire Detection and Suppression Systems, Northern Virginia Community College
- Past President Wisconsin Arson Insurance Council

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# EXPERIENCE

**411 Chain Bridge Road, McLean, VA:** Fire Protection expert services pertaining to unwanted fire sprinkler system activation in affluent executive residence. Technical topics included sprinkler system code requirements, freeze protection, sprinkler leakage, water damage, installation provisions.

**American Family Insurance, Eau Claire, WI:** Investigation into vehicle fire cause and origin, with arson suspected.

**Arango vs. Colonial Properties Trust, NC:** Expert services with regard to an apartment fire in Carrboro, NC, involving a fatality. Analysis with respect to building and fire codes, building construction, fire spread, and smoke detector operation.

**Arch Insurance v Triangle Fire, Miami FL:** Expert services pertaining to analysis of a commercial kitchen hood and vent fire suppression system as involved in a fire. Determination of adequacy of the suppression system installation and maintenance.

**Al Plaza Oil Leak, San Juan, Puerto Rico:** Investigation of significant damage in a high rise building owned by Al Group in San Juan, Puerto Rico. Damage was result of a fuel oil leak that was not detected by the oil sensor connected to the building fire alarm system.

**Bedford Residence, CT:** Legal expert services for a fire cause and origin and construction defects involving analysis of construction and code compliance of a residential fireplace, effect of deficiencies on fire spread.

**Body vs. Ancona, WI:** Expert services to determine code requirements pertaining to smoke detectors, model fire and smoke development, and analysis of human behavior in a loss of life fire in Wisconsin.

**Boyce vs Central Security, Memphis, TN:** Expert services to evaluate purpose and operation of a residential fire and security alarm system pertaining to a fire in a single-family residence.

**BP Oil vs. City of Alexandria, VA:** Expert witness for the petroleum facility regarding fire safety and code compliances regarding a petroleum facility.

**Children's Hospital of Baltimore, MD:** Legal expert services for a fire cause and origin including extent of damage.

**Christian Day School vs. Fairfax City, VA:** Expert witness for the school regarding building construction, occupancy classification, fire alarm, and sprinkler systems.

**City Utilities, Springfield, MO:** Investigation into vehicle fire cause and origin involving a public-passenger bus.

**Coastal Fire Protection, Baton Rouge, LA:** Fire protection expert services with regard to an unwanted sprinkler system activation in a high-rise building. Performed analysis of reason for sprinkler activation, lack of fire alarm reaction, and water damage.

**Collier vs. Mountain State Inspection Services, WV:** Expert services to determine code requirements and inspection responsibilities pertaining to smoke detectors in a loss of life fire.

**Corcoran Prison, CA:** Legal expert services for design, construction, operation, maintenance, and testing of fire alarm systems.

**Deanne A. Ellis v United States of America, Center for Disease Control, Atlanta, GA:** Expert witness services to analyze code requirements pertaining to exit sign and exit sign mounting requirements.

**Duah v Buzzoto, Fairfax, VA:** Expert services with regard to unwanted activation of a sprinkler system in an apartment building, water damage assessment, effect of weather conditions, anti-freeze systems, sprinkler system maintenance and repair practices.

**Fairfield Inn Sprinkler System: Chesterfield, VA:** Investigation into failure of dry-pipe sprinkler system involving freezing and subsequent water damage. Determination of installation and maintenance errors pertaining to the cause of the loss.

**Fire Investigation: James Forrest, Richmond, VA:** Expert witness services to determine the cause of a fire and damage to the roof and other areas of a residence.

**Fire Watch Services, Manassas, VA:** Provide professional fire protection engineering/expert witness services, pertaining to failure of dry-pipe and wet-pipe fire sprinkler systems, including site observation, review of applicable codes and criteria, presenting of findings and opinion, and preparation for depositions.

**Florida State College at Jacksonville, Jacksonville FL:** Investigation into cause of sprinkler system leakage and pipe corrosion. Analysis of Microbiologically Influenced Corrosion (MIC) as cause. Supervise water sampling and laboratory testing for MIC. Development of remediation efforts to prevent future occurrences.

**Grand Marquis Hotel, Wisconsin Dells, WI:** Professional fire protection expert and expert witness services regarding technical assistance in evaluating fire protection and code issues in connection with a fire at the hotel. Issues include human behavior in fire conditions, fire and smoke development, construction, fire detection and alarm system, audibility of fire alarm system, and smoke compartmentation.

**Greenbaum vs. Boardwalk Apartments, Lawrence, KS:** Building and fire code analysis, arson evaluation, and fire spread analysis.

**Hurtado v Three Fountains One LLC, Houston, TX:** Fire protection and expert witness services with respect to an apartment building fire involving arson and severe injury to an apartment resident. Issues investigated and analyzed include fire sprinkler systems, fire detection and alarm systems, fire safety and means of egress.

**JC Corporation v Interstate Fire & Safety Equipment Company, Stamford, CT:** Investigate fire based on documents, photographs and reports by others for a fire that occurred with the scene closed to prior to engagement. Fire was in a restaurant property. Issues involve commercial kitchen hood, duct, and fire suppression systems, use of plasma cutter in removal of the kitchen hood, fire cause and origin and licensing of workers.

**Latimer v VIT, Norfolk, VA:** Fire Protection Engineering and Expert Witness services with regard to fatal accident involving underground fire protection system piping. Analysis of shutdown and disconnect procedures, pipe and fitting connections and anchoring.

**Holmes vs. Narver. New York, NY:** Legal expert services regarding fire cause and origin, Central Station response. Fire Department response.

**Lake Laura Fire Investigation, Bayse, VA:** Fire investigation to determine cause and origin at a condominium. Issues involve two separate electrically heated saunas which appeared to have both caught fire on separate floors of the condominium.

**Lexington Insurance Co. vs. Starflight Enterprises Inc., Columbia, MD:** Expert witness services with respect to cause and origin of a fire at an apartment complex.

**Longberger Company, Day Care Center, Columbus, OH:** Legal expert services for a dry-pipe sprinkler sprinkler system failure.

**Longberger Company, Columbus, OH:** Investigation into cause and origin of vehicle fire in a corporate-owned truck.

**Louisiana State v Honeywell, New Orleans, LA:** Expert Services with regard to sprinkler system activation with no fire event in a high-rise office building. Analysis of cause of fire sprinkler system activation and fire alarm system defects causing no alarm signal being reported to central station. Findings include temperatures in excess of acceptable ambient for sprinklers and multiple fire alarm system faults.

**Mackensie Union Place Fire, Colorado Springs, CO:** Expert analysis of a fire in a commercial kitchen. Evaluate failure of Ansul hood suppression system.

**Maegden v United States of America, GA:** Expert witness services with regard to case involving personal injury due to slip/fall. Examine code requirements pertaining to exits, stairs, arrangement and materials, slip-resistance, coefficient of friction of floor materials.

**Marriott Hotels vs. Grinnell Sprinkler Company, MD:** Expert witness services regarding sprinkler system installation, polybutylene sprinkler pipe material, material storage, and sprinkler system activation.

**McDavid vs Reserve Square Apartments, Cleveland, OH:** Fire Protection expert services in a case involving a fatality in a mixed-use retail and apartment building. Analysis of building and fire code requirements, smoke detector and fire alarm requirements, operations and adequacy of smoke detectors and fire alarm system, security guard services response, examination of smoke detectors involved in the fire. Development of a computerized fire model of the event indicating time of ignition, smoke development and progress, heat build-up, operation of installed and theoretical smoke detectors, threats to life of deceased person including carbon monoxide levels by time, oxygen depletion by time, descending smoke layer by time and temperature by time.

**McSteen vs Dane Construction, Cleveland, OH:** Fire Protection expert services in a case involving a fatality from a fire in an apartment building. Analysis of building and fire code requirements, smoke detector and fire alarm requirements, operations and adequacy of smoke detectors and fire alarm system, fire extinguisher requirements, fire doors, fire barriers and separations.

**Miami Metropolitan Correctional Center, Cogefar-Impresit USA vs. U.S. Federal Bureau of Prisons, Miami, FL:** Expert review and expert witness services for automatic sprinkler systems and fire detection and alarm systems.

**Myrtle Beach Condominium & Hotel, Myrtle Beach, SC:** Expert fire protection engineering services to investigate a possible sprinkler system deficiency related to sprinkler system piping damage and a possible improperly sealed or improperly fire stopped penetrations of fire rated construction assemblies.

**New York City Homeless Shelter, NY:** Expert witness for fire protection and life safety survey, report/documentation, and design recommendations for several homeless shelters including Fort Washington Housing, Franklin Armory Housing, Sumner Armory Housing, Flushing armory Housing, and Atlantic Armory Housing Facilities.

**NSK Corporation v Oberle & Associates, IN:** Fire cause and origin determination in a warehouse, woodworking, and metalworking facility. Determination developed based on documents and photographs due to scene not available at the time of engagement.

**Pacific Insurance v Allied Barton Inc., Miami, FL:** Fire Protection Engineering expert services with regard to water damage from a fire sprinkler system in a high-rise office building. Technical topics include reason for sprinkler activation, sprinkler head defects, water damage, water spread, and actions by contract security officer.

**Quay Condominium v Simplex Grinnell, Ocean City, MD:** Fire Protection Engineering and expert services with regard to multiple, repeated unwanted sprinkler system activation in luxury condominium high-rise building. Determination of installation defects causing unwanted sprinkler activation. Design and construction supervision of repairs to sprinkler system. Expert services in support of law suit.

**Rajwant Dhillon, LolitaTan, and the Estate of Remedios Reites v Oly-Ida Emerald Place:** Expert services with regard to a fire with fatalities in an apartment building in Seattle, Washington. Analyze code compliance, fire detection systems and fire department response.

**Residential Fire Hazard, Virginia Beach, VA:** Expert services with regard to claim of Inadequate Shelter by the Department of Social Services alleging fire hazards in a single family residence in Virginia Beach. Analyze site conditions compared to State of Virginia residential Building Code. Appear and testify before Department of Social Services Hearing.

**Rubatex Corporation, Bedford, VA:** Legal expert services regarding fire resistance and flame spread of building materials. Direct fire test in accordance with Standard E-119.

**SC Diamond vs Stanley Associates, Virginia beach, VA:** Expert services with regard to a fire in a large warehouse. Fire cause and origin, evaluation of sprinkler system operations, fire department operations, metal halide lighting fixtures, fire spread, and storage arrangement.

**Smithsonian vs. Northern Fire Protection, Washington, DC:** Expert witness services to investigate the apparent unwanted activation of a sprinkler installed at the Smithsonian Institution.

**Sommers vs. Infotech, New York, NY:** Expert witness for the high rise office building concerning fire alarm systems, smoke detection, smoke detectors, and central monitoring system involving an April 1985 fire.

**SWA Construction Co. vs. K&E Sprinkler Co., Richmond, VA:** Expert witness services regarding sprinkler system and CVPC pipe conformance with applicable Fire Protection and Life Safety codes and standards.

**Trinh v India Grocers, Cleveland, OH:** Expert services pertaining to a fire in a mercantile grocery situated in a strip-mall. Evaluate cause and origin of a fire, responsibility for maintenance of electrical lighting fixtures and storage practices.

**United States v Jeremiah Jones, Baltimore, MD:** Expert witness services for the Federal Department of Public Defender. Examine fire alleged to be arson. Analyze previous investigations, previous conclusions, cause of fire, spread of fire, electrical equipment involved, fire department operations, and damage estimates.

**Walker vs. Baker, Romney, WV:** Expert witness services to investigate the cause of a fire at a residence.

**Whitnal Edge Condominium, Milwaukee, WI:** Legal expert services for automatic sprinkler system.

## PROFESSIONAL EMPLOYMENT HISTORY

- Systech Fire Protection, LLC, Fredericksburg, VA, Principal, 2007 to Present
- Systech Group Inc., Reston, Virginia, Principal, 1991 to 2007
- Rolf Jensen & Associates, Inc., Fairfax, Virginia, Engineering Manager, 1985-1991
- Wisconsin Insurance Plan, General Manager, 1982-1985
- Village of Westhaven, Illinois, Building Commissioner, Building Inspector, 1976-1984
- Insurance Services Office of IL and WI, Inspector, Engineer, Automatic Sprinkler System Customer Service Representative, Assistant Supervisor and Assistant Manager, 1974-1982

## SELECTED PUBLICATIONS AND SPEAKING ENGAGEMENTS

- Fire Safety in Atrium Buildings
- Fire Safety in Exhibition Halls
- Adoption of the BOCA Code in Washington, D.C.
- Sacred Trusts-Protection of Historical Churches
- Retrofitting: Planning and Implementation of Security & Fire Systems, *Security Technology & Design*, September 1991

## PROFESSIONAL ENGINEERING REGISTRATIONS

State	Registration	State	Registration
California	FP1516	New Jersey	24GE04988400
Connecticut	23096	North Carolina	14784
Delaware	7633	North Dakota (inactive)	PE-5217
District of Columbia	8926	Ohio	E-59915
Florida	PE 0044616	Pennsylvania	PE-037624-R
Georgia	PE 036402	South Carolina	12065
Illinois	37418	Tennessee (inactive)	019947
Louisiana (inactive)	26436	Texas	84969
Maryland	16211	Virginia	018501
Minnesota (inactive)	25806	Washington	35562
Mississippi	21117		
Missouri	PE-2013000183	West Virginia	10477
New Mexico (inactive)	14333		
New York	2621729	Wisconsin	E-20562