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JOHN G. O'NEILL, P.E., FSFPE

SUMMARY

With over 35 years of specialized and directly applicable experience in the fire protection engineer field, Mr. O'Neill brings a widely diverse expertise in this field to the projects he is engaged in. He is a nationally recognized leader in the field of water based fire protection systems and, for the past six years, has been Chairman of the NFPA's Technical Correlating Committee on Automatic Sprinklers. Mr. O'Neill has extensive experience in the design and installation of sprinkler, standpipe and water supply systems, and other fire suppression systems, the application of building codes as they apply to fire protection systems, the evaluation and resolution of code compliance issues, the research and development of sprinkler related products, and direct experience in the investigation of fire related events.

EDUCATION

B.S. Fire Protection Engineering, University of Maryland - College Park, MD

REGISTRATION

Professional Engineer - California

PROFESSIONAL AFFILIATIONS

- Fellow, Society of Fire Protection Engineers
- Member, National Fire Protection Association
- Member & Past Chairman, NFPA Technical Correlating Committee on Automatic Sprinklers, NFPA 13, 13D, 13R, 16 & 24 Standards
- Member NFPA 13/25 Task Group on MIC Corrosion
- Former member of U.S. Technical Advisory Group to ISO on Fire Suppression Systems
- Certified Fire & Explosion Investigator - National Association of Fire Investigators

SPECIALTY FIELDS

A design professional with over 30 years of fire protection and life safety consulting engineering experience specializing in:

- Fire protection system design
- Building/fire code and life safety analysis
- Fire protection system acceptance and testing
- Performance based design
- Fire modeling
- Forensic investigation and expert witness services

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CAREER HISTORY

College Park, (Prince Georges County)MD; Part time paid and volunteer firefighter, reached rank of Lieutenant in Station 12, Prince Georges County, MD.

University of Maryland Fire & Rescue Training Institute; Part time instructor aide for training of volunteer fire department personnel from various fire departments throughout the State of Maryland in structural and flammable liquid fire fighting.

Prince Georges County, MD; Department of Licenses and Permits - Position: Part time engineering aid to the Department's Fire Protection Engineer responsible for reviewing commercial building projects for compliance with the building code.

Factory Mutual Engineering Corporation, Philadelphia District - Position: Field fire protection engineer responsible for surveys, systems testing and loss investigations for insured industrial, institutional, commercial, higher education and residential properties. Reviewed special hazards project plans and fire suppression system plans for insured properties.

National Bureau of Standards, Building Research Division, Fire Research Section - Position: Project fire protection engineering manager responsible for full scale tests evaluating fire resistance of various construction assemblies. Served as technical representative to four housing manufacturers involved in Operation Breakthrough, a federally funded innovative housing design and construction program.

US Army Engineer Command, Europe & V Corps Facilities Engineering - Position: Fire protection engineer responsible for technical supervision of facilities fire protection programs for US Army facilities in West Germany. Conducted fire loss investigations, training of civilian staff, reviewed project plans for compliance with Corps of Engineer and local fire protection criteria and coordinated with local municipal fire departments for fire fighting support.

National Bureau of Standards, Center for Fire Research; Gaithersburg, MD - Position: Research fire protection engineer responsible for applied fire suppression systems research and testing programs involving institutional, residential, industrial and special hazard fires. Conducted investigations of major fires in health care facilities. Served as NBS representative to the US Technical Advisory Group to ISO for development of international product standards for automatic sprinkler system components and fire suppression systems.

Gage Babcock & Associates, Washington, DC Area - Position: Senior engineer and Principal responsible for fire protection engineering consulting and design projects in various institutional, cultural, industrial, commercial, higher education and residential projects. Program manager for special fire testing programs and performed forensic/expert witness services.

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The Protection Engineering Group, PC, Chantilly, VA - Position: Vice President & Partner. Project fire protection engineer responsible for fire protection, life safety and code consultation to owners, architects, engineers and contractors. Responsible for design projects involving cultural, industrial, residential, commercial, storage and residential facilities. Perform forensic investigations/expert witness services regarding fire incidents and performance of fire protection systems

REPRESENTATIVE EXPERIENCE

- **Fire Investigations/Expert Witness Support** - Conducted over 50 investigations and provided expert witness services regarding factors affecting fire spread, fire suppression systems including sprinkler/standpipe, foam-water, underground piping, gaseous and wet-chemical systems for a wide range of facilities and clientele.
- **Naval Air Station, Willow Grove, PA** - Provided expert witness services involving failure of fire protection water supply piping to a U.S. Navy hangar, Willow Grove Naval Air Station, PA
- **East Penn Manufacturing Company, PA** - Expert witness services regarding sprinkler system performance in a fire involving a large battery storage and distribution warehouse in Lyon Station, PA
- **Eagle Erie Conference Center, VA** - Investigation of fire suppression system failure in a commercial kitchen equipment fire at a conference center in Lynchburg, VA
- **Ford Motor Co. Assembly Plant, OH** - Expert witness regarding the performance of carbon dioxide fire suppression system in a fire involving an industrial paint spray operation.
- **New Orleans Distribution Center, LA** - Expert witness regarding alleged failure of sprinkler systems and underground piping in a large warehouse fire.
- **Posey County Warehouse, IN - Linpac & GE Plastics** - Expert witness regarding the performance of sprinkler system and associated water supply at a large plastics manufacturing and storage facility fire in Mt. Vernon, IN.
- **Rigby Produce Warehouse, ID** - Expert witness regarding estimated performance of active fire protection systems in this non-sprinklered warehouse fire. Provided code analysis regarding requirements for construction types, allowable heights and areas, and active fire protection systems.

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- **U.S. Air Force Medical Center, Dayton, OH** - Expert witness involving contractor's claim for installation of fire sprinkler and fire alarm systems at U.S. Air Force Medical Center at Wright Patterson Air force Base. Client was the U.S. Army Corps of Engineers, Louisville, District
- **Atlanta Medical Center, GA** - Expert witness for alleged sprinkler system piping failure in a high rise medical center in Atlanta, GA
- **Sprinkler Forensic Investigations - Various Locations** - Forensic investigations and expert witness services regarding freeze related sprinkler systems failures and alleged non-fire related sprinkler activations in commercial, institutional and residential properties.
- **VA Medical Center, Tuscaloosa, AL** - Expert witness regarding a contract claim centered on the sprinkler system installation in the VA Medical Center in Tuscaloosa, AL
- **National Park Service Training Centers** – Lecturer regarding fire protections systems criteria, installation, inspections, testing and maintenance for NPS facilities managers. Conducted training classes at NPS's Harpers Ferry, WV and Grand Canyon, AZ Training Centers.
- **American Fire Sprinkler Association (AFSA) Instructor** - Prepared lesson material and served as instructor for the American Fire Sprinkler Association Seminar on Automatic Sprinklers in the Building Codes – August, 2002
- **Andrews Air Force Base, Camp Springs, MD** - Project manager for investigation of hydraulic transient, surge related dedicated fire suppression system failures, and design of system improvements to remediate surge problems at a flammable liquid bladder tank handling facility and hangar. Provided surge analysis and design of dedicated fire protection system modifications for the US Air Force One Maintenance Complex.
- **National Library of Canada, Ottawa, Canada** - Consulting fire protection engineer to the National Research Council of Canada regarding full scale fire testing program and subsequent design of the retrofit installation of sprinkler, standpipe, and hose stations system in the stack areas of the National Archives and National Library of Canada.
- **British Aerospace Corporation, Dulles, VA** - Project manager for fire protection/sprinkler system analysis and design for large rack storage warehouses for British Aerospace Corporation.
- **CVS Corporation, Petersburg, VA** - Project manager for fire protection/sprinkler system analysis and design for large rack storage warehouse.

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- **National Air & Space Udvar-Hazy Museum** – Project manager for fire protection performance based code analysis and fire suppression systems design for the new Smithsonian Institution \$300 museum and restoration facility located at Washington Dulles Airport in Chantilly, VA
- **Main State Department, Washington, DC** - Project manager for the design of phased life safety improvements and fire and sprinkler systems in this 2.2 million sq-ft high-rise building.
- **World Building, Silver Spring, MD** – Project manager for design and construction technical supervision phased sprinkler, standpipe and fire pump and fire alarm evacuation system improvements at this high-rise office building in downtown Silver Spring
- **World Bank Headquarters, Washington, DC** – Project manager for retrofit design and construction technical supervision of a pre-action sprinkler system and associated fire detection and alarm system in the Bank’s main data center in this high-rise office and conference center
- **Naval Surface Weapons Centers, VA and MD** - Project manager for the analysis and design of high speed fire suppression systems for munitions and propellant handling / manufacturing facilities at the Naval Surface Weapons Centers at Dahlgren, VA and Indian head, MD
- **The College of William and Mary, Williamsburg, VA** - Project manager for providing life safety/code analyses for the restoration and partial adaptive reuse of the historic (1697) Wren Building at the College of William and Mary. Project included use of computer fire modeling to help resolve life safety/exiting issues while preserving the historic fabric of the building.
- **Patent Office Building Renovation, Washington, DC** - Project manager for the fire protection and security design for a \$120M renovation and restoration project of the historic Patent Office Building, Washington, DC. Building houses the Museum of American Art and the National Portrait Gallery of the Smithsonian Institution
- **National Archives and Records Administration (Archives II), College Park, MD** - Principal-in-Charge for the fire protection consulting and design of the 1.75 million sq-ft, \$200M National Archives II in College Park, MD. Project manager who developed innovative concepts for improved fire protection of 750,000 sq-ft of mobile compact shelving used for storage of archival collections. Developed testing plan and oversaw full scale fire testing program to validate fire protection concepts.

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- **DOD Secured Facilities – Ft Meade & Brookmont, MD** - Project manager for sprinkler, fire pump, underground water piping, fire alarm, and life safety improvements at Department of Defense secured facilities including high-rise buildings, including projects up to \$10M in construction costs
- **Library of Congress – Logistics Storage Facility** – Project manager for design of ESFR sprinkler system for new 150,000 sq-ft rack storage facility. Served as code consultant to the Owner and the design team.
- **Headquarters, Sakhalin Energy Company, Yuzhno-Sakhalinsk, Russia** - Project manager for the design of sprinkler, fire pump, and fire alarm systems for a new high-rise office building in Yuzhno-Sakhalinsk, Russia as part of a design–build team. Systems included wet-pipe, dry pipe and pre-action systems designed to meet seismic zone 4 earthquake criteria.
- **National Archives II – College Park, MD** -Project manager for water quality and metallurgical tests, study, design and construction management of a \$1.4M sprinkler system corrosion repair and treatment project
- **U.S. Department of State, Washington, DC** - Project Manager for the design of sprinkler, fire pump and on-site fire protection water storage systems for the new U.S. Embassy in Lima, Peru and the U.S. Embassy Annex in Tegucigalpa, Honduras. This was part of a design-build effort.
- **Cleveland Hopkins International Airport (Continental Terminal), Cleveland, OH** - Project fire protection engineer and code consultant to the owner and design team for the new \$80M Continental /Continental Express Airlines Terminal and underground passenger connector. Developed performance based life safety analysis for special egress requirements.
- **Construction Management Services (Issue Resolution), Various Locations and Firms** - Construction management support for resolution of issues involving fire rated construction and fire protection systems in over 30 multifamily residential, commercial and institutional buildings.
- **Industrial Facilities (Special Hazards)** - Project engineer for review of over 75 Special Hazard projects and associated suppression systems and safeguards at various locations in the Mid-Atlantic region for Factory Mutual Engineering District Office in Philadelphia, PA..

TECHNICAL PAPERS, ARTICLES, REPORTS PUBLISHED

- National Bureau of Standards Reports:
 - “Fire Test of an Interstitial Steel Truss Floor-Ceiling assembly”, 1972
 - “Fire Test of a Hospital Corridor Wall Assembly,” 1972
 - “Fire Tests of Stairwell – Sprinkler Systems,” 1981
- Fast Response Sprinklers in Patient Room Fires, *Fire Technology*, November, 1981
- “Full-Scale Fire Tests and Development of Design Criteria for Sprinkler Protection of Mobile Shelving Units”, *Fire Technology*, first quarter edition, 1994
- “Securing Our Nation’s History with Improved Fire Protection,” *Consulting Specifying Engineer*, may, 1995
- “Pumping Power”, *Consulting Specifying Engineer*, May, 1997
- “Mist Opportunities”, *Consulting Specifying Engineer*, August, 1997

RECENT TECHNICAL PRESENTATIONS

- *Automatic Sprinkler Requirements in the New NFPA 5000 Building Code*, National Fire Protection Association Fall Meeting, Dallas, TX; November, 2001
- *Performance Based Design for a Historic Building*, The Fire Protection Research Foundation Fire Suppression and Detection Research Application Symposium, Orlando, FL., January 2002
- NFPA 13 Update, National Fire Protection Association World Safety Conference & Exposition, Las Vegas, NV., June, 2005
- NFPA Sprinkler Systems Standards – 2007 Edition Update, National Fire Protection Association World Safety Conference & Exposition, Orlando, FL., June, 2006

SEMINARS – TRAINING

- NFPA 921, Guide to Fire and Explosion Investigations; 14- hour Tested Seminar, National Fire Protection Association Annual Meeting, May 2004, Salt Lake City, UT
- National Fire, Arson & Explosion Investigation Tested Training Program, National Association of Fire Investigators & co-sponsored by the National Fire Protection Association, August 2006, Sarasota, FL

AWARDS

- Elected Fellow, Society of Fire Protection Engineers International, May 2001
- National Fire Protection Association Committee Service Award, May 2002