

## Objectives

Apply fire protection engineering experience to complex, high-value facilities and programs. Nurture growth and development of early-career fire protection engineers. Work towards the construction of safe communities, strengthen national security infrastructure, and form positive relationships with others in design, construction, and safety fields.

## Experience

### Sigma Science

2022 – Present

Provide full-time support to the Defense Threat Reduction Agency for the preparation of Fire Hazards Analyses for US Air Force nuclear weapons-capable storage and maintenance facilities. Prepare and analyze egress models for determination of required safe egress times for compliance with FC 4-420-07F. Prepare and analyze fire models for the determination of available safe egress times and to assist DTRA with analysis of the fire performance of facility contents. Provide detailed and comprehensive review of new facility design documentation for pre-construction FHA preparation and review existing conditions at operational facilities to aid in updating existing FHA documentation.

### Los Alamos National Laboratory

2019 – 2022

Work as full-time fire protection engineer for the Engineering Services – Fire Protection (ES-FP) group which acts as LANL's authority having jurisdiction for fire protection issues. Prepared and maintained detailed fire hazard analyses (FHAs) for complex radiological, nuclear, and other high-value facilities to satisfy DOE program requirements and assist with facility maintenance and improvements. Provided construction project support, plan review and approval. Performed facility fire protection and life safety system assessments. Performed commissioning, periodic testing, and maintenance oversight of fire protection systems. Prepared equivalencies and exemptions. Applied Department of Energy Directives, national codes and standards, and highly protected risk protection criteria to new and existing facilities and activities. Provided fire protection and life safety technical support to facility management.

### Koffel Associates

2006 – 2018

Worked as a full-time fire protection engineer, maintaining primary responsibility for a wide range of design and consulting projects in public and private sectors, including management of company resources and communication with clients. Performed computational fire modeling (FDS, Smokeview, CONTAM, Pyrosim, Pathfinder) for evaluation of smoke management in large volume spaces and for performance-based designs of unique facilities. Assisted with consulting, design, and commissioning of fire protection systems at Army, Navy, and Air Force facilities in the Mid-Atlantic region. Participated in five SFPE International Conferences on Performance-Based Design and Fire Safety Methods preparing the US Case Study; three times presenting and twice as project manager. Member of SFPE Committee for Development of Standard on Design Fire Scenarios. Acquired Maryland P.E. license in 2012.

## Education

### University of Maryland College Park

Bachelor's Degree, 2007

Graduated Dean's List with Bachelor's Degree in Fire Protection Engineering from the ABET accredited program at the Clark School of Engineering. Member of SFPE Student Chapter and Salamander Honor Society. Earned certificate in College Park Scholars program for Science, Technology, and Society. Acted as Secretary, then Treasurer of Club Fencing Team.

## Skills

Fire alarm system design, sprinkler system design, smoke control system design, fire protection system commissioning and construction administration, fire and smoke modeling, code consulting (ICC codes, NFPA codes, local amendments, UFC, DOE Orders, other state and federal government codes), performance-based design, working in a team environment. Strong technology skills (computers, office productivity software, fire modeling software, familiarity with AutoCAD and Revit and design/construction documents). Strong writing, presentation, and technical communication skills. Ability to maintain security clearance and work with controlled information.