

Kelly J. Krieg, PE | Senior Principal Engineer | Large/Complex Loss

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Professional Summary:

Ms. Krieg has over 20 years of experience in structural engineering, materials science, building science, and building envelope consulting, including work in higher education facilities management, metal wall and roof panel and aluminum curtainwall product development and design of masonry and timber structures. Her areas of forensic expertise include failure analysis, building enclosure and structural condition evaluation, metallurgy, premises liability and code compliance, and construction defect investigation.

Ms. Krieg has evaluated roof system failures, structural deficiencies, water intrusion cause and origin, swimming pool failures, historic church roof and foundation conditions, retaining wall failures, including segmented retaining walls, and maple basketball and other sports floor condition assessments. She has performed assessments following hail events, tornados, Hurricane Ian, floods, tree and vehicle impacts, structure fires, sink holes, pipe freezes, demolition, explosions, and other related events. She has performed code assessments for trips and other falls. She has provided depositions and legal testimony.

Areas of Expertise:

- Structural Engineering
- Material Science
- Building Science
- Construction Defect
- Building Envelope Assessment
- Premises Liability

Licenses and Certifications:

Professional Engineer, Pennsylvania, License PE077554

Professional Engineer, New York, License 103166

Professional Engineer, Maryland, License 53978

Professional Engineer, Ohio, License PE.84689

Professional Engineer, West Virginia, License 023570

Professional Engineer, Connecticut, License PEN.036932

Professional Engineer, Vermont, License 018.0135683

Professional Engineer, Michigan, License 6201312026

Professional Engineer, Kentucky, License 37272

Professional Engineer, Tennessee, License 123743

Professional Engineer, Colorado, License PE.0053724

Professional Engineer, Florida, License PE87916

Project Experience:

High School Fire Structural Assessment, Pennsylvania

Performed a structural assessment of a 75-year-old high school auditorium, including masonry walls and steel roof trusses, following a fire. Assisted the client in determining if structure was safe for occupancy and in facilitating demolition of the auditorium, while protecting adjacent structural elements.

Catholic Church Assessment After Tornado, New Kensington, Pennsylvania

Performed a structural assessment of an over 130-year-old church that had sustained roof damage from a EF0 tornado. Assisted the client in determining what remaining large, timber roof framing members were safe to remain, and how to repair those that were damaged. Facilitated swift replacement of the roof, to protect the plaster interior of the sanctuary, mosaics, and other fixtures.

Partial Building Collapse, Pittsburgh, Pennsylvania

Performed a structural assessment and cause and origin investigation of an over 100-year old row structure. Assisted the client in evaluating the remaining structure, as well as construction documents and permits of past work, to determine subrogation potential.

Retail Store Code Evaluation, numerous locations, Western Pennsylvania

Code evaluations of sidewalks, ramps, and egress paths at numerous big box retail stores for liability cases.

Hail Damage Evaluation, Denver and surrounding suburbs, Colorado

Performed evaluations of asphalt shingles, metal panels, concrete tile and membrane roof systems following 2 to 3-inch diameter hail events.

Steel Frame Collapse, Michigan

Performed an evaluation of damage to steel framing for a commercial metal building that was under construction to determine the cause of collapse. Assessed site for evidence of possible tornado-type winds.

Foundation Construction Assessment, Colorado

Performed an evaluation to determine the cause of foundation cracks and displacement in new construction in a condominium complex. Reviewed contracts and project documents to determine responsibility.

Court Qualifications/ Depositions:

Construction Defect – Commercial Roof Installation, Civil Court, Beaver, Pennsylvania

Construction Defect – Residential Framing, Civil Court, Cleveland, Ohio

Professional Experience:

EFI Global, Principal Engineer, 2023, Senior Principal Engineer, 2023-2024

Rimkus, Consultant – Property, 2018-2019, Senior Consultant – Property, 2019-2023
Pie Consulting & Engineering, Project Manager – Building Science Group, 2018
University of Pittsburgh, Department of Facilities Management, Project Manager, 2016 – 2018
CENTRIA, Structural Engineer, 2009 – 2016, Sustainability Associate, 2011-2016, Product Engineering Manager, 2015 – 2016
Civil & Environmental Consultants, Inc., Engineer, 2006 - 2008
Three Rivers Aluminum Company (TRACO), Estimator, 2004, Product Engineer, 2004 - 2006
Avbel Engineering, Engineer in Training, 2004

Education:

Master of Science, Materials Science and Engineering, University of Pittsburgh, Pittsburgh, PA, 2020
Master of Architectural Engineering, Architectural Engineering, Structural Option, The Pennsylvania State University, University Park, PA, 2003
Bachelor of Architectural Engineering, Architectural Engineering, Structural Option, The Pennsylvania State University, University Park, PA, 2003

Affiliations:

International Institute of Building Enclosure Consultants (IIBEC) – Consultant, Region I