CRIS-HAWK FARRIN, P.E. – Curriculum Vitae

EDUCATION

University of New Hampshire, M.S. in Civil Engineering, 2010
University of New Hampshire, B.S. in Civil Engineering, 2009
Coursework included general civil engineering topics with an emphasis in structural design.

REGISTRATIONS AND MEMBERSHIPS

Professional Engineer, Civil: New Hampshire (2016), Connecticut (2017), Maine (2017), Massachusetts (2017), New York (2017), Rhode Island (2017), Vermont (2017), Texas (2017). Area of specialty within Civil is Structural Engineering.

Structural Engineers of New Hampshire (2015)

EMPLOYMENT

Associate Principal Engineer; BAE Forensics, LLC from 2025 to present.

Senior Forensic Structural Engineer / Team Lead for the forensic evaluation of damage to existing buildings for EFI Global, Nashua, NH, from 2017 to 2025.

Project Engineer for the analysis and design of structures for Summit Engineering, Portsmouth, NH, from 2011 to 2016.

Assistant Engineer and Graduate Researcher in the concrete materials laboratory for the Civil Engineering Department of the University of New Hampshire, Durham, NH from 2009 to 2010.

AREAS OF EXPERIENCE

Engineering Consultation and Investigation

Experienced structural engineer with comprehensive project management expertise and strong communication skills. Specializes in residential and commercial forensic building investigations. Demonstrates thorough knowledge of national and regional building codes for both existing and new construction projects. Integrates a background of structural design expertise with extensive forensic engineering experience in damage origin and cause analysis.

I have been an engineer for over 15 years and have experience evaluating more than 1,000 residential and commercial structures with a variety of damage.

PROJECT EXPERIENCE

Vegetative Green Roof Investigation - Cranberry Isles, Maine
Coordinated removal of existing green roof to expose liquid-applied resin roofing membrane. Assignment included developing a protocol to expose the roofing without causing additional damages, determining cause of leaks, review of construction drawings and documents, and overseeing destructive testing.

Exterior Wall Tile Failure Investigation - Laconia, New Hampshire
Reviewed partial failure of exterior tile façade assembly to determine the cause of tile detachment. Extensive review of building envelope design and construction. Observed demolition to verify as-built conditions and compared to construction drawings and documents.

Construction Vibration Investigation - Dracut, Massachusetts
Reviewed cracked and deflected structures to determine whether the damage was caused by nearby construction blasting. Obtained and reviewed seismographic data in the form of blast logs. Literature review of studies comparing particle velocity and frequency to structural damage thresholds.

Tree Strike Damage Assessment - Milton, Massachusetts
Reviewed structural damage caused by a tree impact to a residence constructed in the 1800s. Distinguished between existing age-related conditions versus damage due to the impact. Correspondence with the local building official regarding proposed repair measures. Building code review to compare code-mandated repairs with proposed corrective actions. Opine on repairability versus reconstruction of the structure.

Moisture Infiltration Assessment - Millis, Massachusetts
Lead forensic engineer for a 75,000 square-foot residential investigation involving determination of moisture ingress. Oversee removal of photovoltaic roof panels, removal of existing roof coverings, review of roof and attic ventilation systems, and installation of a new roof coverings. Evaluate loads applied to the original roof structure by the addition of photovoltaic roof panels. Consider deflection caused by said loads and reviewed structural reinforcement calculations and drawings. Review town meeting minutes to determine first documented instances of moisture ingress at the property.

Hurricanes Harvey, Ian, and Irma - Florida & Texas
Inspected over 50 residential and commercial structures following Hurricane Harvey in 2017, Hurricane Ian in 2022, and Hurricane Irma in 2023 (storm damage occurred in 2017, evaluations occurred in 2023). Inspections included wind versus flood related damage, cause and extent of damage to foundation systems following flooding events and building envelope failures.