



Michael S. Faron, P.E., S.E.

Structural Engineer



BACKGROUND

Mr. Michael S. Faron is a registered professional and structural engineer with over 17 years of experience in structural engineering analysis, design, failure analysis and construction services. His design experience includes structural design of residential, commercial and industrial structures, building and equipment foundation design, retaining wall design, and structural renovations and modifications of structures.

Mr. Faron has supervised construction and repair operations, responded to construction deviations, developed design specifications and procedures, and supervised project implementation. He has worked in the property/construction side of forensic consulting since 2015, where his work in the field of forensic engineering includes inspection and analysis of failures in civil/structural engineering related residential, commercial, municipal, and industrial buildings.

Forensic assignments have included cause and origin investigations, design and construction defects, foundation and superstructure failures and collapses, construction site accidents, fire and storm damage assessments, large property damage, deficiencies related to building code compliance, industry standards, contract specifications, roof damage investigations, moisture intrusion investigations, building envelope failure investigations, property condition assessments, construction vibration, flood damage, pipe freeze investigations, subsidence, grain bin failures, and natural disaster response. Mr. Faron has also provided litigation/subrogation support and expert testimony during depositions.

Contact Information

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Key Areas of Technical Expertise Include:

- Forensic Structural Engineering
- Structural Design and Analysis
- Building Envelope Evaluation and Repair
- Litigation/Subrogation Support
- Construction Defects
- Construction Administration

LICENSES

- **Structural Engineer (SE)**
 - Illinois
- **Professional Engineer (PE)**
 - Illinois
 - Indiana
 - Michigan
 - Iowa
 - Wisconsin
 - Minnesota
 - Nebraska
 - Florida
 - North Carolina
 - South Carolina
- **Contractor Licenses**
 - Licensed Mason Contractor in the City of Chicago
 - Licensed General Contractor in Florida

FORENSIC ENGAGEMENTS

- **Natural Disaster Investigations**
 - Hurricane Irma (2017) – Wind/rain damage. Performed investigations in Key West, FL, Miami, FL, Fort Myers, FL, and Naples, FL.
 - Hurricane Michael (2018) – Wind/rain damage. Performed investigations in Panama City, FL.
 - Derecho in Cedar Rapids, IA (August 2020) – Wind/rain damage. Performed investigations throughout the Midwest including Cedar Rapids, IA.
 - Hurricane Ida (2021) – Wind/rain damage. Performed investigations in New Orleans, LA and Baton Rouge, LA.
 - Structural assessment of structures following tornados.

- **Construction Defect Evaluations**

- Green Bay, WI (2016) – Spalling of the top surface of a concrete slab occurred in a car dealership shortly following its installation. Investigated the causes that contributed to the spalling of the concrete.
- Chicago, IL (2019) – Cracks formed in the first story CMU walls of a four-story building as a result of improper grouting/reinforcing of the walls. Site inspection and repairs/modifications to the structure were provided.
- Chicago, IL (2021) – Investigate causation of structural cracks in interior finishes of a newly built building.
- Minneapolis, MN (2021) – Determine repair protocol following improper installation of reinforcing bars in a concrete slab on grade in a commercial building.
- Various Locations – Investigation of moisture intrusion through building facades and roofing systems following discovery of deteriorated and moisture-stained wood.
- Chicago, IL, Verona, WI (2022) – Investigation into cause and origin of failure of TPO and EPDM roofing systems within two years of installation.
- Milwaukee, WI (2022) – Destructive investigation following moisture intrusion around windows and frost build up on outlets throughout a newly built residence.

- **Structural Failures and Damage Assessment**

- Beaverville, IL (2015) – Grain bin failure investigation.
- Gurnee, IL (2015) – Failure of several masonry walls during a windstorm. The building was under construction at the time of the failure.
- Grinnell, IA (2016) – Roof of a pre-engineered metal building failed due to the weight of snow drifts.
- Dewey, IL (2018) – Failure of steel tower conveyor system attached to several grain bins during a windstorm.
- Chicago, IL (2018) – Partial collapse of two-story multi-unit residential CMU building under construction.
- Peru, IL (2019) – Structural evaluation of steel framed building following a large fire. Repair recommendations were provided in report format.
- Chicago, IL (2019) – Evaluation of multi-wythe masonry wall following demolition of the adjacent building.
- Galesburg, IL (2020) – Investigation of partial roof collapse of a wood-framed gable roof.
- Chicago, IL (2020) – Cause and origin investigation of moisture damage and deterioration of pre-engineered wood trusses bearing on CMU garage walls. Structure was seven years old.
- Glencoe, IL (2020) – Widespread deterioration/rotting of wood-framing as a result of long-term absorption of moisture through the stucco cladding.
- Mokena, IL (2021) – Roof collapse due to the weight of ice and snow.
- Jonesboro, AK (2021) – Condition assessment and repair recommendations of structure and foundation system following partial collapse of an industrial building during a tornado.
- Jonesboro, AK (2022) – Condition assessment of a concrete slab and foundation system of an industrial building that sustained structural damage following the passing of a tornado.

- **Evaluation of Bowstring Truss Structures**

- Rochelle, IL (2016) – Failure of several bowstring trusses.
- Elgin, IL (2020) – Roof collapse due to failure of several bowstring trusses.
- Chicago, IL (2021) – Failure of bowstring truss not under the load of snow or ice.

- **Moisture Intrusion**

- Chicago, IL (2020) – Structural condition assessment of pre-engineered wood trusses and LVLs damaged as a result of exposure to moisture.
- Chicago, IL (2021) – Concrete slab on grade cracked as a result of moisture intrusion and settlement of the soil supporting the slab.
- Various Locations – Moisture damage to wood-framing in attics.

- **Façade Investigations**

- Aurora, IL (2019) – Moisture intrusion through EIFS and stucco. Damage was noticed after water was infiltrating windows in the residence.
- Various Locations – Masonry veneer failures.

- **Roof Damage Assessments**

- Various Locations (2015) – Present - Investigation of reported damage to low-sloped roofing systems.
- Various Locations (2015) – Present – Investigation of hail and wind damage to sloped roofs.
- Florida (2017-2020) – Assessment of damage to shingle and tile covered roofs in Florida following the passing of Hurricane Irma.

- **Large Property Loss Evaluations**

- New Orleans, LA (2021) – Damage assessment of 48-unit condo building following the passing of Hurricane Ida.
- New Orleans, LA (2021) – Damage assessment of a 96-unit townhouse association following the passing of Hurricane Ida.
- Baton Rouge, LA (2021) – Evaluation of two multi-story hotels in Baton Rouge.

REPRESENTATIVE PROJECT EXPERIENCE

- **Engineering/Design**

- Columbia Nuclear Generating Station – Benton County, WA (2008-2010) – On site inspection of failed siding system on reactor building. Evaluated failed siding/girt system damaged in a windstorm at Columbia Nuclear Generating Station and designed the new siding system and installation details.
- Mast Climber Modeling – Columbia Nuclear Generating Station (2008-2010) – 3D computer modeling of the anticipated seismic and wind force of mast climbers used to install the siding.
- DC Cook Nuclear Plant – Berrien County, MI (2008) – Design of 30-ft tall steel platform supporting three 25,000-pound transformers. Worked on various design projects at DC Cook between 2008 and 2015.

- Residential Building – Chicago IL (2007-2008) – Design of a 7-story concrete multi-unit residential structure with post-tensioned slabs.
- Roof Truss Design – Melrose Park, IL (2007-2008) – Design of a 35-ft-long roof truss using existing steel roof girders as the top chord to span across the entire interior of the building, eliminating existing interior columns.
- High-Rise Building – Charlotte, NC (2007-2008) – On a team of designers for 50-story high rise concrete structure with transfer beams and new column locations every 10 floors.
- Roof Top Unit Installation – Chicago, IL (2007-2008) – Evaluation of existing roof structures to determine installation details for new roof top unit installation.
- Single Story Building – Various Locations (2007-Present) – Design of engineered wood beams such as laminated veneer lumber and glulam beams for single story residences. Design of two-story wood structures.
- Church Design – Crystal Lake, IL (2006) – Design of a masonry and wood single story church structure with precast plank flooring system.
- Steel Warehouse Renovation – Franklin Park, IL (2006) – Renovation of existing steel warehouse to add a mezzanine level. This required performing an evaluation of the existing columns and footings and several site surveys.

PROFESSIONAL EXPERIENCE

• **Faron Engineering & Consulting**

2022 – Present

- Principal Structural Engineer

Responsible for performing forensic investigations of residential, commercial, and industrial structures to determine the cause and origin of reported damage to the structure. Projects included failure investigations, building assessments, moisture intrusion investigations, construction defect claims and investigations, and litigation support.

Structural analysis and design related to building renovations and modifications and preparation of construction documents for such projects. Construction support and administration. Perform façade assessments, including City of Chicago Critical Façade Inspections.

• **Envista Forensics**

2021 – 2022

- Senior Structural Engineer – Central Region

Responsible for performing forensic investigations of residential, commercial, and industrial structures to determine the cause and origin of reported damage to the structure. Projects included failure investigations, building assessments, moisture intrusion investigations, construction defect claims and investigations, and litigation support.

• **Rimkus Consulting Group, Inc.**

2015 – 2021

- Senior Consultant – Central Region

Responsible for performing forensic investigations of residential, commercial, and industrial structures to determine the cause and origin of reported damage to the structure. Projects

included failure investigations, building assessments, moisture intrusion investigations, construction defect claims and investigations, and litigation support.

• **Sargent & Lundy, LLC** **2006-2007, 2008 – 2015**

• Project Associate/Senior Associate

Performed structural design and analysis, prepared proposals, and managed projects. Managed power plant modification projects, including multi-disciplinary coordination to ensure the work was being performed in an efficient manner on budget and on schedule. Responsible for the evaluation of existing structures and members in industrial facilities and power plants. Responsible for the design of new steel and concrete structures including large concrete elevated floor slabs, 30-ft tall steel platforms for transformers. Performed design of anchorage to concrete for large industrial heat exchangers, pumps, electrical cabinets, and steel framed structures. Also performed design of new pipe supports and tank supports.

• **Fisher + Partners Structural Engineers** **2007 – 2008**

• Project Engineer

Responsible for the design of new buildings including one story wood framed buildings, mid-rise concrete buildings, and mid-rise steel buildings with braced frames and moment frames as the lateral force resisting systems. Also responsible for evaluating the condition of existing structures to facilitate renovations and creating detailed construction documents for projects including design drawings. Coordinated project details with architects and clients to complete jobs in a timely manner on budget.

• **Barry Levin & Associates** **2006**

• Project Engineer

Responsible for the design of several one- and two-story structures including foundations, metal roof deck diaphragms, masonry walls, steel beams, girders, and retaining walls. Some of the structures were renovations and additions, including the reinforcing of existing members. Created working drawings including foundation plans, framing plans, and detail sheets.

• **S&S Contractors, Inc.** **2005 - 2006**

• Project Manager

Responsible for managing projects, organizing projects, supervising up to 15 masons and laborers to expedite work plans efficiently. This included reviewing construction drawings and preparing estimates. Prepared invoiced for clients based on work completed. Also worked as a masonry laborer, supplying brick, mortar and other materials to masons.

EDUCATION

Master of Science, Structural Engineering, 2005

Illinois Institute of Technology – Chicago, Illinois

Bachelor of Science, Mechanical Engineering, 2003

Illinois Institute of Technology – Chicago, Illinois

PROFESSIONAL AFFILIATIONS

- Structural Engineer Association of Illinois (SEAOI)
- American Society of Civil Engineers (ASCE)
- American Institute of Steel Construction (AISC)

NOTABLE CONTINUING EDUCATION

- F.I.R.E. Chimney Fire Investigations (2018)