



HALLIWELL

MICHAEL J. FORNEK, PE, SE
SENIOR FORENSIC ENGINEER,
CIVIL/STRUCTURAL ENGINEERING SERVICES
CHICAGO, IL

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SPECIALTIES

- Structural Condition Assessment
- Failure/Damage Investigations
- Expert Testimony and Litigation Support
- Construction Defect Analyses
- Repair and Rehabilitation Design
- Building Code Analyses
- Steel Structures
- Concrete Structures
- Building Envelope Failure Analyses
- Structural Design
- Peer Review
- Property Loss Consulting
- Standard of Care for Design Professionals
- Construction Document Review and Analysis

BIOGRAPHY

Michael specializes in the evaluation of complex structural systems and the design of repairs for structural distress and serviceability problems in buildings, bridges, and other structures. His background includes the analysis and design of long-span bridges, high-rise structures, and post-earthquake damage evaluations in New Zealand. He has evaluated and repaired numerous structures, including parking garages, commercial properties, residential buildings, and large-scale infrastructure projects. Michael has performed and managed advanced finite element analyses ranging from whole-building models to highly detailed failure simulations.

Throughout his career, Michael has combined structural design expertise with forensic engineering and construction experience to provide practical, constructible solutions for clients. His work has included structural condition assessments, failure investigations, rehabilitation design, litigation support, and peer review services involving concrete, steel, and post-tensioned structures. He has also served in leadership roles within the structural engineering profession, including service on the Board of Directors of the Structural Engineers Association of Illinois (SEAOI).

QUALIFICATIONS

Master of Science in Structural Engineering, Stanford University, Stanford, CA

Bachelor of Science in Civil Engineering (Structural), University of Illinois at Urbana-Champaign, Champaign, IL

INDUSTRY CERTIFICATIONS, LICENSES AND MEMBERSHIPS

- Licensed Structural Engineer in Illinois

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- Licensed Civil Engineer in California
- Licensed Professional Engineer in Illinois, New York, New Jersey, Pennsylvania
- SEA0I Board of Directors
- American Society of Professional Engineers (ASCE), Member
- American Institute of Steel Construction (AISC), Member

PROFESSIONAL EXPERIENCE

- Halliwell, Senior Forensic Engineer, Civil/Structural Engineering Services
- Wiss, Janney, Elstner Associates Inc., Senior Associate
- Thornton Tomasetti, Project Engineer
- Alfred Benesch and Company, Project Engineer

REPRESENTATIVE ASSIGNMENTS

Structural Condition Assessments

Baxter International | Deerfield, IL

Yearly assessments of steel framed parking garages and precast parking garage for ongoing structural repairs.

City of Evanston | Evanston, IL

Structural assessment of five concrete parking garages in City for ongoing maintenance repairs.

400 E. Ohio | Chicago, IL

Yearly structural and architectural assessments of building façade for 50-story high-rise condo in downtown Chicago.

Amazon Warehouses | Greater USA

Performed assessments of over 50 Amazon facilities with emphasis on best refuge area during wind events.

Failure/Damage Investigations

SR-91 Falsework Collapse | Corona, CA

Failure investigation involving the collapse of temporary bridge falsework. Expert deposition testimony provided.

Honolulu Area Rapid Transit (HART) | Oahu, HI

Forensic investigation of concrete cracking in large-scale concrete pier caps and development of repair recommendations.

The Address Hotel | Dubai, UAE

Structural damage assessment of a 65-story hotel following a major fire event.

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Kentucky Collapse | Louisville, KY

Investigation and root cause analysis of structural failure at wastewater treatment plant.

Litigation Support

Gaillard Center | Charleston, SC

Structural review and analysis supporting a construction claim involving a steel performance center.

LaGuardia Airport | New York, NY

Ongoing litigation support related to the construction of a new airport terminal headhouse.

Construction Defect Analysis

The W Hotel | Philadelphia, PA

Evaluation of construction defect claim regarding floor levelness and shoring procedures of concrete floors during construction.

Repair and Rehabilitation Design

400 E. Randolph | Chicago, IL

Adaptive reuse design for extension of elevator shafts at residential high-rise building.

Mississippi Terrace | Keokuk, IA

Design of post-tensioning and concrete repairs for a seven-story residential structure.

875 N. Michigan Avenue (Hancock Building) | Chicago, IL

Structural services supporting modifications to the existing structure.

70 West Madison | Chicago, IL

Design of rooftop fall protection system for existing high rise.

Steel Structures

One Rotary Center | Evanston, IL

Structural assessment and design of repairs related to ongoing corrosion for steel-framed parking garage.

69 W. Washington | Chicago, IL

Structural assessment and design of repairs for rooftop structural steel framing.

Structural Design

Willis Tower Repositioning (Catalog) | Chicago, IL

Structural design services for new steel-framed podium structure at base of iconic tower.

Ka'ahakini Bridge Replacement | Hawaii, HI

Structural design services for new concrete bridge to address scour issues related to stream migration.

Wacker Drive Viaduct | Chicago, IL

Structural design services for new post-tensioned viaduct structure in downtown Chicago.

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Red Gate Road | St. Charles, IL

Structural design of new cable-stayed pedestrian bridge underslung from roadway bridge crossing the Fox River.

Milwaukee Intermodal | Milwaukee, WI

Structural design of roof trusses for reconstruction of new train shed.

Peer Review

I-74 (Iowa-Illinois Memorial Bridge) | Bettendorf, IA

Structural peer review services for basket-handle tied-arch bridge over Mississippi River, including FEA modeling.

Property Loss Consulting

Multiple Projects – Earthquake Damage Assessments | Christchurch, New Zealand

Structural damage assessments and repair schemes following 2011 earthquake.

Construction Document Review and Analysis

NICTD South Shore Line | Hammond, IN

Structural document review for design-build project extending south shore commuter rail line.

Construction Administration/Construction Engineering

Englewood Flyover | Chicago, IL

Served as field engineer for structural work related to grade separation of railroad structures.

RECENT TESTIMONY

2021. SR91 Falsework Collapse. De Anda, Jr., et al. v State of California Department of Transportation (Caltrans), et al.