PERSONNEL QUALIFICATIONS

Thomas M. Frankie | Associate Principal and Unit Manager

EDUCATION

- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Civil Engineering, 2008
  - Master of Science, Structural Engineering, 2010
  - Doctor of Philosophy, Structural Engineering, 2013

PRACTICE AREAS

- Concrete Structures
- Corrosion
- Failure/Damage Investigations
- Instrumentation/Monitoring/ Load Testing
- Litigation Consulting
- Nondestructive Evaluation
- Repair and Rehabilitation
- Structural Analysis
- Vibration and Noise Monitoring

REGISTRATIONS

- Professional Engineer in IL
- Structural Engineer in IL

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Society of Civil Engineering
- Earthquake Engineering Research Institute
- International Concrete Repair Institute
- Structural Engineers Association of Illinois

EXPERIENCE

Since joining WJE in 2013, Thomas Frankie has performed a broad range of assignments, including condition assessment, failure investigation, nondestructive evaluation, monitoring of existing structures, structural testing and analysis, development of repair plans and specifications, and construction period services.

Dr. Frankie specializes in the assessment of reinforced concrete structures compromised due to failure, accident, natural disaster, or material degradation, including corrosion. He has applied advanced laboratory and field investigation techniques to many unique situations. Dr. Frankie has investigated concrete-related problems in numerous structures, including historic and modern buildings, bridges, stadiums, parking garages, cooling towers, seawalls, slabs-on-grade, pavements, and foundations.

Dr. Frankie is affiliated with several professional societies, has authored numerous papers in peer-reviewed journals, and has given technical presentations on the development and application of various experimental and analytical methods in structural engineering.

REPRESENTATIVE PROJECTS

Corrosion

- Soldier Field - Chicago, IL: Concrete inspections and corrosion monitoring
- Miami-Dade County Courthouse - FL: Evaluation of reinforced concrete corrosion mitigation methods
- Multiple International Projects: Corrosion/durability consulting and subject matter expert
- Medical Center - Westchester, IL: Corrosion rate testing and consulting

Failure/Damage Investigations

- Leo Frigo Bridge - Green Bay, WI: Investigation of failed interstate bridge pier
- Natural Gas Explosions - U.S. Locations: Multiple investigations of damage to numerous residences and businesses
- IT Center - IL: Investigation and consulting after foundation settlement

Instrumentation/Monitoring/Load Testing

- Medical Center - Dallas, TX: Instrumentation and load testing of barrier cable systems
- Storage Facility - Tampa, FL: Evaluation and testing of carbon fiber repairs

Litigation Consulting

- Litigation/Subrogation Cases Nationwide: Bridges, high-rises, commercial, retaining structure, and aquatic and community centers
- Expert opinion provided on multiple structural and materials-related claims
- Consulting on separate disaster-related lawsuits over $15 million and on materials-related lawsuits over $5 million

Nondestructive Evaluation

- Condominiums - Galveston, TX: Assessment of concrete cover with radar techniques
- Natural Draft Cooling Towers - MD: Nondestructive evaluation and consulting
- Seawall Structures - United States: Nondestructive evaluation of concrete materials and settlement-related concerns

Repair and Rehabilitation

- Mid-Rise Residential Property - Wilmette, IL: Balcony, masonry, and window repairs
- Gateway Technical College - Racine, WI: Facade repair services on multiple buildings

Structural Analysis

- Dix Dam Powerhouse - Harrodsburg, KY: Evaluation of approach bridge deck and structural slab capacities
- Apartments - Madison, WI: Evaluation of fire-damaged reinforced concrete structures

Vibration and Noise Monitoring

- Pipelines - IL and IN: Vibration monitoring during excavation and stabilization of pipeline route
- CTA Station - Chicago, IL: Vibration monitoring of adjacent buildings during demolition and construction

CONTACT

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