



## PERSONNEL QUALIFICATIONS

### Douglas Crampton | Associate Principal



#### EDUCATION

- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Civil Engineering, 1998
- University of Texas at Austin
  - Master of Science, Civil Engineering, 2000

#### PRACTICE AREAS

- Bridge Engineering
- Computer Modeling
- Field Inspection
- Repair and Rehabilitation Design

#### REGISTRATIONS

- Bridge Inspection Team Leader in Indiana and Texas
- Bridge Program Manager in Illinois
- NHI Course 130055 - Safety Inspection of In-Service Bridges
- NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges
- Professional Engineer in IA, IL, IN, MI, MS, and OH
- Structural Engineer in IL

#### PROFESSIONAL AFFILIATIONS

- American Institute of Steel Construction (AISC)
- Structural Engineers Association of Illinois (SEAOI)

#### CONTACT

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#### EXPERIENCE

Since joining WJE in 2000, Douglas Crampton has participated on a number of projects involving the investigation, analysis, and repair of existing structures. He has performed numerous computer analyses in order to model the behavior of existing structures, the failure mode of collapsed structures, and the performance of applied repairs/retrofits. Mr. Crampton routinely evaluates structural distress and provides remedial recommendations for residential and commercial structures.

Mr. Crampton has also participated on a wide range of projects involving the design, inspection, evaluation, rehabilitation, analysis, and construction observation of bridge structures, including peer reviews of bridge, tunnel, and other ancillary transportation structures. Following a partial ceiling collapse of a tunnel structure constructed during Central Artery/Tunnel project, WJE was retained to perform a "Stem to Stern" Safety Review of all transportation structures included as part of Boston's "Big Dig" project. Mr. Crampton served as deputy project manager for this project, which involved a peer review of approximately 200 steel and concrete bridge structures, 22 miles of tunnel structures, and 3,500 ancillary signage/luminare structures.

#### REPRESENTATIVE PROJECTS

##### Bridge Engineering

- Boston Central Artery/Tunnel - Boston, MA: Safety inspection of steel viaducts, concrete viaducts, tunnels, and building structures
- Deerpath Bridge over the Skokie River - Lake Forest, IL: Investigation of bridge condition and design of replacement structure
- Old Elm Road Bridge over the Skokie River - Lake Forest, IL: Design of replacement bridge structure and construction inspection services
- Wacker Drive Viaduct - Chicago, IL: Baseline survey and subsequent inspections as part of the health monitoring program

##### Computer Modeling

- Chicago Department of Transportation - Chicago, IL: Development of analysis method to evaluate approximately 1,300 pin-hanger connections

- Illinois Department of Transportation - Cook and Will Counties, IL: Member force analysis and load rating for eight bascule bridges
- Poplar Street Interchange - East St. Louis, IL: Nonlinear computer modeling to design redundancy retrofits for nonredundant bridge structures
- Wastewater Treatment Plant - Broward County, FL: Structural concrete slab vibration analysis

#### Field Inspection

- Cal-Sag Channel Trusses - Cook County, IL: Fracture critical inspections and load rating
- I-480 Bridge over the Missouri River - Council Bluffs, IA: Inspection of fatigue-sensitive weld details
- Iowa Department of Transportation - Various Locations: Inspection and evaluation of weathering steel patinas for thirty-one bridges
- Iowa Department of Transportation - Various Locations: Routine and fracture critical inspections of major river bridges
- Tennessee Department of Transportation - Rutherford and DeKalb Counties, TN: Nondestructive inspection of steel pin-hanger connections in selected bridges

#### Repair and Rehabilitation Design

- America West Arena - Phoenix, AZ: Connection analysis and design of roof truss reinforcement
- Boise State University, Bronco Stadium - Boise, ID: Investigation of premature concrete deterioration and development of repairs
- Cedar Street Bridge - Peoria, IL: Field inspection of steel superstructure and repair design
- Chicago Public Schools - IL: Investigation and strengthening of wood roof trusses
- O'Hare International Airport - Chicago, IL: Pedestrian canopy evaluation and repair design
- Wabash Memorial Bridge - Mount Vernon, IN: Design of seismic retrofits for bridge superstructure