



## PERSONNEL QUALIFICATIONS

### Matthew W. Jarrett | Associate III



#### EDUCATION

- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Civil Engineering, 2013
  - Master of Science, Structural Engineering, 2015

#### PRACTICE AREAS

- Bridges and Civil Infrastructure
- Structural Analysis/Computer Applications
- Failure/Damage Investigations

#### REGISTRATIONS

- Professional Engineer in IL
- Bridge Inspection Team Leader in IL
- NHI Course 130055 - Safety Inspection of In-Service Bridges
- NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges

#### PROFESSIONAL AFFILIATIONS

- American Institute of Steel Construction (AISC)
- American Society of Civil Engineers (ASCE)

#### CONTACT

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#### EXPERIENCE

Since joining WJE in 2015, Matthew Jarrett has been involved in the inspection, evaluation, and rehabilitation of wood, steel, and concrete structures. He has participated in numerous bridge inspections, involving many different bridge types across several states. He has experience performing computer analyses, both large-scale and small-scale, of bridge and building structures. Mr. Jarrett has also participated in the evaluation and analysis of the erection and demolition of various steel structures, load rating of bridges, and investigation of damaged/failed structures.

Prior to joining WJE, Mr. Jarrett worked as a construction engineering consultant and a graduate research assistant specializing in the analysis of superstructures of integral abutment bridges.

#### REPRESENTATIVE PROJECTS

##### Bridges and Civil Infrastructure

- Concrete Culvert Inspections - Various Locations: In-depth inspection of cast-in-place and precast concrete culverts in Illinois
- East Chicago Bascule Bridges - East Chicago, IN: In-depth and fracture critical inspection of two steel plate girder bascule bridges
- Harlem Avenue Bridge over Calumet Sag Channel - Worth, IL: Fracture-critical inspection of steel truss bridge and steel beam approach spans
- Indiana SR-46 - Columbus, IN: In-depth and fracture-critical inspection of cable-stayed bridge
- Iowa Department of Transportation - Various Locations: Routine, in-depth, and fracture-critical inspections of major river bridges; load rating of steel truss, steel plate girder, precast-prestressed concrete beam, and cable-stayed bridges
- Liberty Bridge - Pittsburgh, PA: Emergency repair and straightening of buckled steel truss member
- Local Bridges - Village of Barrington Hills, IL: Routine inspection of bridges and culverts
- Multiple State Highway Bridges - OR: Load rating refinements for steel plate girder and reinforced concrete arch bridges

- Poplar Street Facility Bridge - East St. Louis, IL: Bridge condition assessment, load rating, and rehabilitation design
- Timber Pedestrian Bridge Inspection - Bloomingdale, IL: In-depth inspection of bridge superstructure and substructure
- O'Hare International Airport - Chicago, IL: Pedestrian canopy inspection
- Grain Storage Building - Keokuk, IA: Evaluation and analysis of steel gable frame structure

##### Structural Analysis/Computer Applications

- Bridge Bearing Replacement Procedures - Various Locations: Development and analysis of bridge bearing replacement procedures of multiple span steel beam bridges
- Bridge Girder Erection Procedures - Various Locations: Stability analysis and review of steel girder and precast-prestressed concrete bridge beam erection procedures
- Idaho Transportation Department - Various Locations: Load rating of steel truss and recycled railroad car frame bridges
- Leo Frigo Memorial Bridge - Green Bay, WI: Analysis of tied arch system for cable replacement
- Open Grid Steel Bridge Deck - Boston, MA: Finite element modeling and analysis of steel bridge deck members
- Springfield Avenue Pump Station - Chicago, IL: Computer modeling and analysis of building structure during demolition procedures
- Steel Girder and Bent Cap Analysis - Dallas, TX: Analysis of plate girder and bent cap connections for steel two-girder bridge

##### Failure/Damage Investigations

- Embankment Failure - Skokie, IL: On-site inspection of damaged embankment for sub-surface construction project