PERSONNEL QUALIFICATIONS

Samuel Sherry | Associate III

EDUCATION

- University of Oklahoma
  - Bachelor of Science, Structural Engineering, 2014
  - Master of Science, Structural Engineering, 2016
- Virginia Polytechnic Institute and State University
  - Doctor of Philosophy, Structural Engineering, 2021

PRACTICE AREAS

- Bridges and Civil Infrastructure
- Structural Analysis/Computer Modeling
- Repair and Rehabilitation Design
- Failure/Damage Investigations
- Testing and Instrumentation

REGISTRATIONS

- NHI Course 130055 - Safety Inspection of In-Service Bridges
- NHI Course 130078 - Fracture Critical Inspection of Steel Bridges
- Society of Professional Rope Access Technicians - Level I

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- American Institute of Steel Construction (AISC)
- Transportation Research Board AKB20 Steel Bridge Committee Member

CONTACT

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EXPERIENCE

Samuel Sherry joined WJE in 2021 and has gained specialized experience through his involvement with the inspection, load rating, instrumentation, and design of retrofits of steel and concrete bridge structures. To support these efforts, he has performed nondestructive testing in both the laboratory and on in-service bridges. This work has included extensive laboratory testing of various structural materials and elements. Dr. Sherry has participated in bridge inspections involving many different bridge types across several US states. His recent projects have included analyses, instrumentation, and load ratings of several simple and complex bridge structures.

During his graduate work at the University of Oklahoma, Dr. Sherry tested partial joint penetration welds used on seismic force-resisting systems. While completing his master's degree, he also worked as a structural designer at a low-rise metal building manufacturer. Dr. Sherry was awarded a Via Doctoral Fellowship at Virginia Tech, where he conducted research on the use of carbon fiber-reinforced polymers (CFRP) to retrofit and repair corroded steel structures (flexural and shear retrofits).

REPRESENTATIVE PROJECTS

Bridges and Civil Infrastructure

- I-64 (Sherman Minton) Bridge over the Ohio River - New Albany, IN: In-depth and fracture critical inspection of a tied-arch bridge
- Indiana SR-46 - Columbus, IN: In-depth and fracture critical inspection of cable-stayed bridge
- US-34 Bridge over the Mississippi River - Burlington, IA: In-depth inspection of various components of cable-stayed bridge
- US-90 - Morgan City, LA: Special inspection and field testing of CFRP retrofits

Structural Analysis/Computer Modeling

- INDOT Bridge Load Ratings - Various Locations, IN: Load ratings of multiple steel, prestressed concrete, and reinforced concrete bridges for new construction, rehabilitation, or deterioration
- ODOT Bridge Load Ratings - Various Locations, OR: Load ratings of multiple concrete bridges

Repair and Rehabilitation Design

- Indiana SR-135 - Mauckport, IN: Special inspection for weld flaws via rope access techniques; in situ removal of weld flaws and design of repairs
- Grand Avenue Bascule - Chicago, IL: Calculation of bridge balance for the rehabilitation of two-leaf bascule bridge constructed in 1912
- US-30 over the Des Plaines River - Joliet, IL: Special inspection of two-leaf bascule bridge to develop repair drawings and removal and replacement procedures

Failure/Damage Investigations

- I-35 Interchange - Kansas City, MO: Fire damage assessment and hardness testing for steel characterization

Testing and Instrumentation

- I-310 (Hale Boggs Memorial) Bridge over the Mississippi River - Luling, LA: Instrumentation to monitor repair installation and in-service performance of new deck overlay
- Private Class 1 Railroad Bridge - Western US: Instrumentation of bridge to monitor stresses used to calculate fatigue life
- Large-scale laboratory testing of reinforced concrete beams with proprietary concrete mixes to determine fatigue life performance and durability
- Large-scale laboratory fatigue testing of reinforced concrete beams retrofitted with bidirectional CFRP sheets to investigate how flaws influence fatigue behavior
- Franklin Street Bridge - Chicago, IL: Bascule bridge balance testing