

### Wade M. Clarke | Principal



#### EDUCATION

- Wesleyan University
  - Bachelor of Arts, History, 1997
- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Civil Engineering, 2001
  - Master of Science, Structures, 2002

#### PRACTICE AREAS

- Bridge Engineering
- Failure Investigation
- Repair and Rehabilitation Design

#### REGISTRATIONS

- NHI Course 130055 - Safety Inspection of In-Service Bridges
- NHI Course 130078 - Fracture Critical Inspection Techniques of Steel Bridges
- Professional Engineer in IA, ID, OR, and WA
- Society of Professional Rope Access Technicians - Level II
- Structural Engineer in IL

#### CONTACT

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#### EXPERIENCE

Since joining WJE in 2002, Wade Clarke has been called on to provide on-site investigations, structural evaluations, and repair designs to address a wide variety of structural problems in industrial, parking, commercial, residential, and bridge structures. He has gained extensive experience working as a contractor's engineer on new construction and rehabilitation projects. In addition, he has completed evaluations and repair design for wood structures and concrete foundations. Mr. Clarke has also investigated the failures of numerous structures, including bridges, temporary works, and agricultural facilities.

Mr. Clarke's work on bridge projects has included load rating, strengthening retrofit design and installation, design and installation of retrofits for fatigue-sensitive details, development and evaluation of steel bridge erection procedures, evaluation and design of precast segmental bridge erection equipment, and design of jacking procedures and assemblies for structural repairs and modifications. Mr. Clarke has also performed numerous fracture critical and in-depth inspections and retrofit installations using industrial rope access techniques.

#### REPRESENTATIVE PROJECTS

##### Bridge Engineering

- Liberty Bridge - Pittsburgh, PA: Design and on-site coordination of jacking, straightening, and strengthening of fire-damaged, buckled truss compression chord
- US101 over Umpqua River - Reedsport, OR: Design and installation of repairs for over-height vehicle impact
- St. John's Bridge - Portland, OR: Design and installation of strengthening retrofits for truss gusset plate connections
- Sagert Street over I-5 Bridge - Tigard, OR: Design and installation of repairs for over-height vehicle impact
- Numerous Highway Bridges - Various Locations, OR: Refinement of load ratings to demonstrate adequacy for legal and permit vehicles
- Perrine Bridge - Twin Falls, ID: Evaluation of corrosion in arch truss end posts

- Chicago Skyway - IL: Design of temporary shoring and jacking systems for bridge repairs and main truss member replacement under traffic
- I-280 Maumee River Crossing - Toledo, OH: Design and installation of bridge erection equipment modifications
- I-480 Bridge - Omaha, NE: Installation of retrofits for fatigue sensitive details
- Reed's Island Bridge - Hilo, HI: Condition survey, materials sampling and testing, analysis, and retrofit design for seismic and vehicular loading
- Bridge of the Americas - Panama City, Panama: Fracture critical and in-depth inspections using industrial rope access techniques

##### Failure Investigation

- I-35W Bridge - Minneapolis, MN: Field investigation of steel truss bridge collapse
- Indianapolis International Airport - IN: Failure investigation of two falsework towers during erection of new terminal roof trusses
- Quad County Grain - Oskaloosa, IA: Investigation of collapse of 700,000-bushel-capacity commercial grain bin
- Grain Storage Bins - What Cheer, IA: Investigation of wind-related damage to two steel grain bins
- Flat Storage Building - Lamar, NE: Investigation of failure of the foundation of a grain storage building

##### Repair and Rehabilitation Design

- Garfield Park Conservatory - Chicago, IL: Foundation evaluation and steel truss repair design
- K. Yamada Distributors - Honolulu, HI: Analysis and replacement of damaged concrete warehouse floor slab
- Open Pantry - Milwaukee, WI: Design of repairs for damaged wood roof trusses

##### PROFESSIONAL AFFILIATIONS

- American Institute of Steel Construction (AISC)
- International Association for Bridge and Structural Engineering (IABSE)
- Transportation Research Board (TRB)