PERSONNEL QUALIFICATIONS

Arne P. Johnson | Principal

EDUCATION

- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Civil Engineering, 1987
- University of California, Berkeley
  - Master of Science, Structural Engineering, 1988

PRACTICE AREAS

- Historic Structures
- Vibration Testing and Monitoring for Museums
- Structural Condition Evaluation
- Repair and Rehabilitation Design
- Concrete Deterioration
- Structural Peer Review
- Stadiums and Arenas

REGISTRATIONS

- Professional Engineer in IA, IL, IN, KY, MN, MO, OH, and WI
- Structural Engineer in IL

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Institute for Conservation
- International Association of Museum Facility Administrators
- International Concrete Repair Institute
- Structural Engineers Association of Illinois

CONTACT

ajohnson@wje.com
847.272.7400
www.wje.com

EXPERIENCE

Arne Johnson joined WJE in 1989 after working for a structural design firm in Chicago. At WJE, Mr. Johnson has investigated several hundred concrete, steel, masonry, and wood structures. Most projects have involved structural testing and monitoring, condition assessment, or evaluation of deterioration or failure. Many have included design of repairs, construction documents, and construction observation.

Mr. Johnson has particular expertise in vibration testing and monitoring—especially for the protection of museum art collections and historic structures from vibrations. He also has extensive experience in the evaluation and repair of historic structures, especially aging concrete structures, bridges, and stadia. Mr. Johnson has performed numerous insurance-related investigations involving structural failures, fire damage, wind damage, vibration damage, and foundation settlement. He has also conducted many structural design peer reviews and load rating studies.

REPRESENTATIVE PROJECTS

Historic Structures

- 3rd Avenue and Franklin Avenue Bridges - Minneapolis, MN: Condition assessments, materials testing, and rehabilitation designs for historic concrete arch bridges
- Art Institute of Chicago - IL: Numerous investigations and repair design for buildings
- Soldier Field - Chicago, IL: Annual inspections since 1990, numerous repair designs, corrosion mitigation for historic concrete
- Wrigley Field - Chicago, IL: Stadium condition assessment of stadium for concrete distress
- 860–880 N. Lake Shore Drive - Chicago, IL: Investigation, materials testing and structural repair design for historic apartment towers
- Edgar County Courthouse - Paris, IL: Restoration design for historic courthouse

Vibration Testing and Monitoring for Museums

- Art Institute of Chicago - IL
- Saint Louis Art Museum - MO
- Clark Art Institute - Williamstown, MA
- Oriental Institute Museum - Chicago, IL
- Taft Museum of Art - Cincinnati, OH
- Smart Museum - Chicago, IL
- Pulitzer Arts Foundation - St. Louis, MO
- Neue Galerie New York - NY
- Carnegie Museum of Art - Pittsburgh, PA
- Albright-Knox Art Gallery - Buffalo, NY
- Mildred Lane Kemper Art Museum - St. Louis, MO
- Nora Eccles Harrison Museum of Art - Logan, UT
- Frist Art Museum - Nashville, TN
- Birmingham Museum of Art - AL
- Amon Carter Museum of American Art - Fort Worth, TX
- Field Museum - Chicago, IL
- Baltimore Museum of Art - MD
- State Historical Museum of Iowa - Des Moines, IA
- Herbert Hoover Presidential Library and Museum - West Branch, IA
- Longview Museum of Fine Arts - TX
- Joslyn Art Museum - Omaha, NE
- Country Music Hall of Fame and Museum - Nashville, TN
- Driskell Center - College Park, MD
- Portland Art Museum - OR
- Wiregrass Museum of Art - Dothan, AL
- Dubuque Museum of Art - IA
- Virginia Museum of Fine Arts - Richmond, VA

SELECTED RECENT PUBLICATIONS

- Vibrations and Museum Collections, *Papyrus, International Association of Museum Facility Administrators,* Part 1 (2019), Part 2 (2023)
- Vibration Testing and Mitigation Design for SUE Hall at the Field Museum, *APT Bulletin - Journal of Preservation Technology*, 2020
- Vibration Limits for Historic Buildings and Art Collections, *APT Bulletin - Journal of Preservation Technology*, 2015
- Vibration Control During Museum Construction Projects, *Journal of the American Institute for Conservation*, 2013
- Rehabilitation Design for the Historic 3rd Avenue Bridge, *Concrete Repair Bulletin - International Concrete Repair Institute,* 2022
- Extending the Life of Historic Concrete Arch Bridges: State of the Art, *Structural Engineering International,* 2019
- Cathodic Protection at Soldier Field and the Franklin Avenue Bridge, *APT Bulletin - Journal of Preservation Technology*, 2019
- The Franklin Avenue Bridge: History, Investigation and Rehabilitation, *ACI's Concrete International*, June and July 2017