



EDUCATION

- Stanford University
 - Bachelor of Science, Civil Engineering, 1968
- Cornell University
 - Doctor of Philosophy, Structural Engineering, 1975

PRACTICE AREAS

- Structural Investigation
- Failure Investigation
- Repair and Rehabilitation Design
- Materials Evaluation
- Nondestructive Testing
- Litigation Support
- Research and Testing
- Structural Analysis/Computer Modeling
- Construction Troubleshooting

REGISTRATIONS

- Professional Engineer in KY
- Structural Engineer in IL

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- Precast/Prestressed Concrete Institute
- Structural Engineers Association of Illinois

CONTACT

jfraczek@wje.com
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EXPERIENCE

John Fraczek rejoined WJE in 2001 and is engaged in the resolution of design- and construction-related structural and materials problems. He has investigated and designed repairs for foundation and seismic issues with large precast, post-tensioned liquid retaining structures and reinforced concrete structures in general. Dr. Fraczek also has expertise in structural steel, structural vibrations, and structural repair and rehabilitation. He originally worked at WJE from 1979 through 1991, and was actively involved in all in-house research on corrosion and concrete durability. He also was involved in a broad variety of consulting activities associated with timber, aluminum, steel, and reinforced concrete structures.

Prior to rejoining WJE, Dr. Fraczek worked as an independent consultant. From 1991 to 1999, he served as the President and CEO of Construction Technology Laboratories, Inc., a 130 person engineering consulting firm in Skokie, Illinois. Dr. Fraczek is an established author and previously served as a principal speaker in a nationwide seminar series on concrete repair and restoration. He has presented numerous lectures on structural failures, repair techniques, materials performance, and nondestructive testing.

REPRESENTATIVE PROJECTS

Failure Investigation

- Morgantown, WV: Collapse of hopper in coal silo
- Minneapolis, MN: Collapse of falsework for Lake Street/Marshall Avenue bridge over Mississippi River
- Dhahran, Saudi Arabia: Failure of SANG water tower
- Mexico City, Mexico: Various structures after 1985 earthquake

Materials Evaluation

- Evaluation and repair of concrete piers subjected to alkali-silica reactivity
- Evaluation of concrete durability issues associated with cooling tower at power plant
- Evaluation of cracking in concrete bridge decks

Repair and Rehabilitation Design

- North Bend, OH, and Steubenville, OH: Repair of cooling section of natural draft cooling towers
- Calvert City, KY: Design of new foundation and seismic retrofits for large liquid retention structure
- Proctor & Gamble Headquarters, Mexico City: Design seismic strengthening for beam/column joints

Research and Testing

- National Cooperative Highway Research Program Report No. 313: Corrosion Protection of Prestressing Systems in Concrete Bridges

Structural Analysis/Computer Modeling

- Henderson, NV: Review analysis and construction of world's largest Venturi meter
- Minneapolis, MN: Model collapse of falsework for Lake Street/Marshall Avenue bridge
- Review analysis of collapse of desulfurization platform in steel mill
- Denver, CO: Probabilistic analysis of effects of large clay inclusions in airfield pavement
- Dallas, TX: Finite element modelling of cold joints in chimney mat foundation
- Finite element modelling of effects of voids at CIDH pile/navigation lock interface