



#### EDUCATION

- Purdue University,
  - Bachelor of Science, Civil Engineering, 2000

#### PRACTICE AREAS

- Bridge Engineering
- Building Envelope Assessment
- Concrete Structures
- Peer Review
- Repair and Rehabilitation Design
- Structural Analysis and Investigation
- Steel Structures
- Wood Structures

#### REGISTRATIONS

- Professional Engineer in IL
- Structural Engineer in IL

#### PROFESSIONAL AFFILIATIONS

- American Society of Engineers
- Structural Engineers Association of Illinois

#### CONTACT

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#### EXPERIENCE

Since 2000, Joseph Toniolo has led investigations of damaged and collapsed structures, evaluated and repaired existing structures, managed and coordinated the implementation of repairs, and provided expert reports and testimony. Mr. Toniolo has performed the inspection and evaluation of hundreds of structures, including single- and multifamily residential structures, commercial structures, parking structures, stadiums, schools, and bridges.

Mr. Toniolo specializes in the investigation and repair of wood structures with framing systems ranging from traditional framing and plate-connected trusses to heavy timber and engineered wood products. He has extensive experience with both modern and vintage wood structures. These projects typically involved inspections, structural analysis, and the design of repairs. In addition to wood structures, Mr. Toniolo also has extensive experience with reinforced concrete, precast concrete, structural steel, masonry, and stone.

#### REPRESENTATIVE PROJECTS

##### Bridge Engineering

- Black Hawk Bridge - Lansing, IA: Condition survey of concrete substructure, steel superstructure, and roadway components
- Cedar Street Bridge - Peoria, IL: Condition survey of concrete substructure and roadway surface
- I-435 Overpass Bridge - Kansas City, MO: Fatigue and fracture retrofits

##### Building Envelope Assessment

- LaSalle Bank Building - Chicago, IL: Limestone facade condition survey and specification and inspection of repairs
- Trump Village Apartment Complex - New York, NY: Brick masonry facade condition survey
- U.S. Cellular Field - Chicago, IL: Precast concrete facade condition survey

##### Concrete Structures

- Younkers Building - Des Moines, IA: Inspection and assessment of concrete structure attached to steel-framed structure that collapsed during a fire

- Chicago Public Schools: Load testing and instrumentation, inspection, and repair design for several vintage school structures
- Pearl Harbor Naval Station - Honolulu, HI: Concrete submarine pier condition survey
- Ochsner Medical Center - New Orleans, LA: Condition survey and repair design for conventional and precast concrete parking structure
- Pierre Laclede Center - St. Louis, MO: Condition survey of reinforced concrete parking structure

##### Steel Structures

- Concordia College, Memorial Stadium - Moorhead, MN: Investigation of steel arches, structural analysis, load rating, and retrofit repair design
- Northwestern University, Ryan Arena - Evanston, IL: Analysis of stadium roof framing for support of new scoreboard

##### Wood Structures

- Nationwide: Inspection, analysis, and repair design for plate-connected wood roof truss framings in more than 350 retail building
- Indiana Sugars - Gary, IN: Inspection and repair design of several wind-damaged vintage bowstring trusses
- Osmon Stadium - Valley City, ND: Inspection, structural analysis, and repair of deteriorated glulam arches
- Patriot Commons - Glenview, IL: Investigation of design deficiencies resulting in fenestration issues at multiunit residential structure; repair design, litigation support, and expert testimony
- Grace Lutheran Church - Woodstock, IL: Investigation of failed curved glulam beams, structural analysis, and repair design
- Gavin Elementary School - Ingleside, IL: Failure investigation of fire-retardant treated plate-connected wood trusses, analysis, repair design, and performance monitoring
- Perkins Bass Elementary School - Chicago, IL: Inspection, analysis, and collapse prevention design for vintage heavy-timber truss system