

### David A. Schnerch | Senior Associate



#### EDUCATION

- University of Manitoba
  - Bachelor of Environmental Design, Architecture Option, 1996
  - Bachelor of Science, Civil Engineering, 1999
  - Master of Science, Civil Engineering, 2001
- North Carolina State University
  - Doctor of Philosophy, Civil Engineering, 2005

#### PRACTICE AREAS

- Failure/Damage Investigations
- Instrumentation/Monitoring/Load Testing
- Repair and Rehabilitation
- Concrete Structures
- Masonry
- Facade Assessment
- Peer Review

#### REGISTRATIONS

- Professional Engineer in ME, NC, NH, and VT
- Structural Engineer in MA and RI

#### PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- Boston Association of Structural Engineers, president

#### CONTACT

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#### EXPERIENCE

Since joining WJE in 2005, Dr. David Schnerch has completed a wide range of failure investigations, structural evaluations, load tests, and repair designs of buildings, bridges, parking garages, and other structures. This work has included evaluation of reinforced, prestressed, and post-tensioned concrete as well as masonry, steel, and wood structures.

Before joining WJE, Dr. Schnerch studied the repair of concrete and steel structures using ultra-high modulus fiber reinforced polymer (FRP) materials. This work focused on the repair and strengthening of existing structures and has been published in the *Journal of Bridge Engineering*, *Transportation Research Record: Journal of the Transportation Research Board*, and other publications.

#### REPRESENTATIVE PROJECTS

##### Failure/Damage Investigation

- Museum - Boston, MA: Investigations of concrete topping slab distress and metal wall panel failure
- Mast-Climbing Scaffolding Collapse - Boston, MA: Review of pieces of recovered structure, observation of structural testing, and structural analysis of failure modes
- Various Parking Garages - Biloxi, MS: Evaluation of collapsed structure following storm surge impact from Hurricane Katrina
- Apartment Building - Marlborough, MA: Investigation of a fire-damaged wood and steel structure and design of repairs

##### Instrumentation/Monitoring/Load Testing

- Corporate Headquarters - Johnston, RI: Floor load test of lightweight concrete on composite metal deck floor system
- Filene's Burnham Building - Boston, MA: In situ load testing and deflection monitoring of terracotta and cinder fill floor system
- Hotel and Condominium Buildings - Boston, MA: Preconstruction surveys and vibration monitoring during adjacent construction

##### Repair and Rehabilitation

- Innovation and Design Center - Boston, MA: Concrete facade, window perimeter, and canopy repairs and window replacement

- Condominium - Portland, ME: Structural design of carbon fiber reinforced polymer (CFRP) strengthening system to stabilize existing panelized, brick masonry facade with extensive corrosion deterioration
- Parking Garage - Charlestown, MA: Evaluation of three-level garage and development of repairs for reinforced concrete, steel frame, and masonry walls

##### Concrete Structures

- City Hall Garage - Boston, MA: Investigation and structural analysis of reinforced concrete structure supporting plaza slab
- Civic Center Garage - Springfield, MA: Investigation and testing of five level garage with cast-in-place concrete floor slabs
- Vilas Bridge - Walpole, NH: Detailed condition assessment of historic two-span open spandrel deck concrete arch bridge
- Bridge over Kennebec River, Norridgewock, ME: Investigation, core sampling, concrete testing, and nondestructive evaluation (NDE) of concrete distribution slab

##### Masonry

- Millennium Science Complex - University Park, PA: Investigation of brick distress
- Old South Church - Boston, MA: Evaluation of historic masonry structure and development of repairs following damage from adjacent construction
- Wentworth Institute of Technology - Boston, MA: Evaluation of vibrations due to adjacent construction on masonry sewer

##### Facade Assessment

- Symphony Towers - Boston, MA: Facade inspection, repairs of cementitious wall panels, and sealant replacement
- 245 Summer Street - Boston, MA: Structural analysis of curtain wall and evaluation of recladding/overcladding options

##### Peer Review

- City of Boston Public Facilities Department - MA: Structural peer review of renovations to school and other public buildings
- West Heating plant - Washington, DC: Review of consultant findings relative to potential redevelopment