

### Tanner Swenson | Associate III



#### EDUCATION

- University of Minnesota
  - Bachelor of Science, Civil Engineering, 2013
  - Master of Science, Structural Engineering, 2015

#### PRACTICE AREAS

- Repair and Rehabilitation
- Structural Analysis
- Failure/Damage Investigations
- Concrete Structures
- Steel Structures
- Instrumentation/Monitoring/Load Testing

#### CONTACT

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#### EXPERIENCE

Tanner Swenson joined WJE in 2015 and has since been involved in various structural investigations, including field condition assessments, nondestructive evaluation, structural analysis, assistance with design of repairs and modifications, and construction phase observations. Mr. Swenson's experience includes cast-in-place, precast, and post-tensioned concrete, steel, masonry, and wood structures.

While a graduate student at the University of Minnesota, Mr. Swenson conducted research to determine the effects of temperature on strand stress and camber in precast, prestressed concrete bridge girders. Instrumentation was installed on prestressing strand during fabrication of bridge girders in various weather conditions to monitor strand stress. In addition, a unique test was developed to determine the amount of time it takes for the concrete to bond to the prestressing strands after it is cast.

#### REPRESENTATIVE PROJECTS

##### Repair and Rehabilitation

- Third Avenue Bridge - Minneapolis, MN: Field investigation and evaluation of concrete condition
- North Dakota State University - Fargo, ND: Condition assessment, structural analysis, and design of new concrete steam tunnel encasement
- Sentry Insurance - Stevens Point, WI: Condition assessment, structural analysis, and repair of multilevel, concrete parking garage
- St. John's Episcopal Church - Minneapolis, MN: Condition assessment and repair of bell tower

##### Structural Analysis

- Manufacturing Facility - Omaha, NE: Structural analysis of collapse of steel storage structure
- Thumper Pond Waterpark - Otertail, MN: Structural analysis of roof collapse
- Dairy Farm - Plainview, NE: Structural analysis of metal roof failure
- Private Residence - Monticello, MN: Structural analysis of deck railing failure

##### Failure/Damage Investigations

- Madden's Resort - Brainerd, MN: Investigation and structural analysis of wind damage
- La Quinta Inn & Suites - Bloomington, MN: Investigation of stucco failure
- The Marshall - Minneapolis, MN: Investigation of fiber-cement panel cladding distress
- Manufacturing Facility - Warren, MN: Investigation of fire damage to metal building
- Private Residence - St. Paul, MN: Investigation of fire damage to wood structure
- Railroad Bridge - Minneapolis, MN: Investigation and structural analysis of steel girder damaged by vehicle impact
- Women's Shelter - Minneapolis, MN: Investigation of distress of multilevel wood structure
- Dairy Farm - Emerald, WI: Investigation of precast plank failure

##### Instrumentation/Monitoring/Load Testing

- The Walkway - Minneapolis, MN: Remote vibration monitoring of existing residential structure during adjacent construction
- Private Residence - Wayzata, MN: Remote temperature and humidity monitoring to evaluate window condensation