PERSONNEL QUALIFICATIONS



Tanner Swenson | Senior Associate



EDUCATION

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

PRACTICE AREAS

- Repair and Rehabilitation
- Structural Analysis
- Difficult Access Inspection
- Failure/Damage Investigations
- Concrete Structures
- Steel Structures
- Facade Access Equipment and Fall Protection

REGISTRATIONS

Professional Engineer in MN, ND, and WI

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, structural analysis, 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

- 3rd Avenue Bridge Minneapolis, MN:
 In-depth inspection and testing,
 rehabilitation design, construction assistance
 for historic concrete arch bridge over
 Mississippi River
- Ala Wai Golf Course Honolulu, HI:
 Design and load rating of new concrete slab on existing concrete culvert
- North Dakota State University Fargo: 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
- Community Center Kauai, HI: Design of retrofits to wood structure for hurricane wind loads

Structural Analysis

- Washington Avenue Bridge Minneapolis,
 MN: Load rating of steel bridge structure
- Manufacturing Facility Omaha, NE:
 Structural analysis of collapse of steel storage structure

Difficult Access Inspection

- 3rd Avenue Bridge Minneapolis, MN: Inspection and measurement of steel section loss
- Mining Facility: Interior condition survey of large concrete bins
- Fabric Buildings College Station, TX: Nondestructive evaluation of internal steel structure
- Various Buildings Philadelphia, PA: Facade ordinance inspections

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

Facade Access Equipment and Fall Protection

- Nationwide Insurance Des Moines, IA:
 Design and load testing of facade access anchorages
- Federal Office Building Minneapolis, MN: Design of fall protection anchorages

