

### Sam Keske | Associate III



#### EDUCATION

- Auburn University
  - Bachelor of Civil Engineering, 2008
  - Master of Science, Civil Engineering, 2011
  - Doctor of Philosophy, Civil Engineering, 2014

#### PRACTICE AREAS

- Bridges and Civil Infrastructure
- Construction Troubleshooting
- Repair and Rehabilitation
- Research and Product Evaluation

#### REGISTRATIONS

- Professional Engineer in TX
- NHI Course 130055 - Safety Inspection of In-Service Bridges
- NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges

#### PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI) - Central Texas Chapter
- Precast/Prestressed Concrete Institute (PCI)

#### CONTACT

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#### EXPERIENCE

Sam Keske joined WJE in 2014 and is engaged in the assessment and rehabilitation of a variety of new and existing structures and construction materials. His experience includes comprehensive investigation and rehabilitation of bridges and civil infrastructure facilities, analysis and mitigation of construction defects with litigation support, and repair and rehabilitation design with construction support.

Prior to joining WJE, Dr. Keske evaluated high-performance concrete material and structural behaviors at the Auburn University Highway Research Center. His research included destructive and nondestructive material testing and structural testing of self-consolidating concrete (SCC), long-term evaluation of precast, prestressed girders, and live-load testing of in-service bridges.

#### REPRESENTATIVE PROJECTS

##### Bridges and Civil Infrastructure

- End-Region Cracking of Prestressed Girders - Oklahoma City, OK: Material and structural testing, plant and bridge investigation, analysis, and mitigation and repair design
- In-Service Bridge Maintenance - Austin, TX: Inspection, impact damage investigation, and repair and rehabilitation design of highway bridge superstructures
- Precast Culvert Collapse and Replacement - Austin, TX: Failure investigation, substructure replacement design, and precast superstructure repair design
- Austin Avenue Bridges - Georgetown, TX: Comprehensive structural and materials investigation of twin seventy-five-year-old bridges
- Port of Corpus Christi - TX: Condition assessment, structural evaluation, and repair and rehabilitation design of Port facility bridges
- Port of Los Angeles - CA: Damage assessment of timber and concrete wharf structures following prolonged fire
- Post-Tensioned Parking Deck Evaluation - Little Rock, AR: Review of deterioration, previous repairs, and remaining service life at thirty-year-old concrete deck

#### Construction Troubleshooting

- Regional Water Treatment Facility - Cedar Park, TX: Comprehensive concrete repairs, steel and concrete coatings, moisture mitigation, and litigation consulting
- Structural Slab Low-Strength Concrete - Georgetown, TX: Material testing and structural analysis following concrete placement error

#### Repair and Rehabilitation

- Structural Repair of Repurposed Bank - San Antonio, TX: Crawlspace fiber-reinforced polymer (FRP) and concrete repair design for building to remain in service
- Hotel Stairwells - San Marcos, TX: Condition assessment, material testing, and design of multi-material repairs

#### Research and Product Evaluation

- Uniformity Test Methods for Self-Consolidating Concrete (SCC): Evaluation of fresh and hardened concrete material test methods that quantify uniformity of SCC \*
- Use of SCC in Precast, Prestressed Girders: Evaluation of concrete creep, shrinkage, and mechanical properties, transfer length, time-dependent girder camber and deflection, and live-load testing of in-service SCC prestressed girders \*

\* Conducted at the Auburn University Highway Research Center

#### TECHNICAL COMMITTEES

- ACI 237 - Self-Consolidating Concrete
- ACI 342 - Evaluation of Concrete Bridges and Bridge Elements
- ACI 345 - Concrete Bridge Construction, Maintenance, and Repair