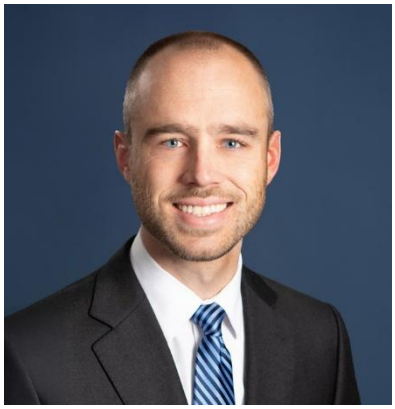
PERSONNEL QUALIFICATIONS

Andrew Stam | Senior Associate



EDUCATION

- Oklahoma State University
  - Bachelor of Science, Civil Engineering, 2007
- University of Texas at Austin
  - Master of Science, Civil Engineering, 2009

PRACTICE AREAS

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

REGISTRATIONS

- Professional Engineer in CO, FL, TX, and WY
- Structural Engineer in NE and UT

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- American Society of Civil Engineers (ASCE)
- Structural Engineers Association of Colorado (SEAC)

TECHNICAL COMMITTEES

- ACI 445 - Shear and Torsion
- ACI 445A - Strut and Tie
- ASCE 7 - Dead and Live Loads Subcommittee
- SEAC - Existing Structures Committee
- SEAC - Steel Committee

EXPERIENCE

Andrew Stam has a diverse background in new design, evaluation, analysis, and research of structures. He is experienced in the design and assessment of various materials and systems, including steel, aluminum, reinforced concrete, prestressed concrete, masonry, and wood. He is proficient in advanced structural modeling techniques, including nonlinear finite element analysis. Mr. Stam applies his experience to solving structural problems, investigating damage and failures, and designing and detailing repairs.

Before joining WJE, Mr. Stam worked for seven years as a design engineer with the Denver-based firm Martin/Martin, specializing in medium- to large-sized commercial, sports, and higher education projects. At the University of Texas, his broad-based research experience included projects in structural steel fatigue, blast loading of wall panels, and strut-and-tie modeling of reinforced concrete.

REPRESENTATIVE PROJECTS

Steel Structures

- University of Texas, Battle Hall - Austin: Analysis of historic steel structure for mechanical system upgrades
- US Olympic Museum - Colorado Springs, CO: Analysis and repair design for failed embedded plate connection
- Administration Building - Boulder, CO: Project Manager for four-story expansion built above existing parking garage *
- Multipurpose Arena - Bangor, ME: Design of gravity system for 8,000-seat arena *
- Airport Terminal Expansion - Los Angeles, CA: Design of special moment-frame lateral system in high seismic area *

Concrete Structures

- Commons Park West Parking Structures - Denver, CO: Investigation of distress and analysis of post-tensioning design
- Liquefied Natural Gas (LNG) Tank Foundations - Cameron, LA: Investigation of alleged damage to pile cap foundations following LNG exposure
- JSP Shielding Vault - Jackson, MI: Design of thick-walled concrete shielding vault
- Miami Marine Stadium - FL: Design of repairs and modifications to historic stadium
- Various Structures - Denver, CO: Use of ground penetrating radar to locate mild and post-tensioned reinforcement
- Mixed-Use Development - Buffalo, NY: Design of deep foundation system supporting twenty-story hotel and arena *

Structural Analysis

- Avenue C Apartments - Billings, MT: Finite element analysis of semi-rigid diaphragms
- Rockport-Fulton High School Gym - Rockport, TX: Nonlinear analysis of existing concrete foundation slab
- High Mast Lighting Towers - Austin, TX: Finite element analysis using Abaqus to aid in hot spot stress analysis **

Failure/Damage Investigations

- Distribution Center - Denver, CO: Investigation of construction collapse
- Residential Structures - Anchorage, AK: Damage assessments following 2017 earthquake and aftershocks
- Private Residence - Aspen, CO: Investigation of water damage to wood framing
- Commercial Building - Denver, CO: Investigations following soffit panel and concrete pile cap failures *

Instrumentation/Monitoring/Load Testing

- Various Structures - Denver, CO: Load testing of fall protection anchorage systems and davit bases
- Wall Panels - San Antonio, TX: Simulated blast loading of cold-formed steel wall panels in shock tube **
- High Mast Lighting Towers - Austin, TX: High-cycle fatigue testing of welded base plate connections **

** Indicates work with previous employer*
*** Indicates research work with the University of Texas at Austin*

CONTACT

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