PERSONNEL QUALIFICATIONS

Jeffrey Dowgala | Associate Principal

EDUCATION

- Drexel University
  - Bachelor of Science, Architectural Engineering, 2010
  - Master of Science, Civil Engineering, 2010
- Purdue University
  - Doctor of Philosophy, Civil Engineering, 2013

PRACTICE AREAS

- Failure/Damage Investigation
- Historic Preservation
- Structural Analysis
- Seismic
- Structural Metals
- Concrete Structures
- Wood Structures

REGISTRATIONS

- FAA Remote Pilot Certificate
- Civil Engineer in CA
- Structural Engineer in AZ, CA, and NV

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- American Institute of Steel Construction (AISC)
- American Society of Civil Engineers (ASCE)
- Earthquake Engineering Research Institute (EERI)

CONTACT

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EXPERIENCE

Jeff Dowgala is a licensed structural engineer with experience in structural design, evaluation and assessment, retrofit, and rehabilitation of various existing buildings and industrial structures, with an emphasis on historic buildings. He has performed in-field investigations, including post-earthquake damage assessments in the United States and other countries. Dr. Dowgala possesses expertise in finite element computer analysis for many different structures and material types.

Dr. Dowgala is experienced with numerous nondestructive testing techniques, such as ground-penetrating radar and ultrasonic pulse velocity. Additionally, he holds an FAA Remote Pilot Certificate and operates drones for photographic surveys.

While studying at Purdue University, Dr. Dowgala's primary academic research focused on using earthquake response data to extract an empirical capacity curve for buildings to quickly quantify the global structural system damage sustained.

REPRESENTATIVE PROJECTS

Failure/Damage Investigation

- Mining Structure Collapse - Pleasanton, CA: Investigation and evaluation of industrial structure collapse
- Crystal Ice Warehouse - Sacramento, CA: Fire damage assessment of historic 1920s-era warehouse
- Shoring Collapse - Oakland, CA: Investigation of concrete podium deck formwork shoring collapse

Historic Preservation

- Alcatraz Cellhouse - San Francisco, CA: Engineer of record for evaluation, analysis, and design of multiple voluntary seismic upgrades
- 16th Street Train Station - Oakland, CA: Structural condition assessment of roof structure
- Century 21 Movie Theater - San Jose, CA: Current condition assessment of historic, domed movie theater

Structural Analysis

- High-Rise Commercial Building - Las Vegas, NV: Time-history analysis of three-dimensional model for 48-story reinforced concrete building
- I-80 Bridge - Des Moines, IA: Three-dimensional nonlinear analysis

Seismic

- Napa County Jail - Napa, CA: Evaluation of post-earthquake damage of three-story, concrete and reinforced masonry building
- Industrial Facility Plant - Jhagadia, India: Seismic nonlinear pushover analysis for highly irregular reinforced concrete moment frame structure with lightweight-masonry infill walls
- Post-Earthquake Assessments - Turkey; Guayaquil; Mexico City; and Napa, California: Evaluation of earthquake damage

Structural Metals

- Commercial Building - Mumbai, India: Development of repairs using structural steel and observations of welding per AWS D1.1 requirements
- Mall - Hayward, CA: Design seismic retrofit of steel-framed structure

Concrete Structures

- High-Rise Tower - San Francisco, CA: Investigation, analysis, and evaluation of barrette deep foundations
- Commercial Building - Mumbai, India: Condition assessment of reinforced-concrete and post-tensioned strands for chloride contamination
- Digester Tank - CA: Investigation and repair of concrete anchorage failure

Wood Structures

- Large Apartment Complex - San Jose, CA: Wood structure assessment

TECHNICAL COMMITTEES

- ACI 133 - Disaster Reconnaissance
- ACI 369 - Seismic Evaluation and Retrofit of Existing Concrete Buildings
- ASTM F38 - Unmanned Aircraft Systems