



EXPERIENCE

David Langefeld’s forensic consulting experience at CA has included the condition assessment and evaluation of distressed structures, the structural modeling and analysis of existing and collapsed structures, and the investigation and evaluation of design and construction defects. While at CA, David has acquired training for the non-destructive evaluation of existing structures. This training has allowed CA to offer additional concrete non-destructive testing services.

Prior to joining CA, David worked as a graduate research assistant at the Phil M. Ferguson Structural Engineering Laboratory (FSEL) at the University of Texas at Austin. At FSEL, David designed, constructed, and tested full-scale prestressed concrete bridge girders. David was studying the shear capacity of bridge girders as limited by the anchorage of the longitudinal reinforcement. David used his experimental results combined with a shear testing database to evaluate the AASHTO provisions related to shear capacity controlled by anchorage.

TECHNICAL COMMITTEES

ACI Committee 222 – Corrosion of Metals in Concrete
ACI Committee 228 – Nondestructive Testing of Concrete

CONTACT INFO

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SELECTED PROJECTS

Forensic Investigation

- Structural and material analysis and assessment of 800,000-gallon tank foundations: San Juan, PR
- Analysis of anchorage zone design and construction: Indianapolis, IN
- Assessment and analysis of failed post-tensioning anchorages: Phoenix, AZ
- Exposed concrete finish quality and dimensional tolerances: Miami, FL
- Analysis and assessment of concrete mixture design and production claims: Panama City, Panama
- Assessment of 1,300,000 sq. ft. concrete pavement and warehouse: Waco, TX

Structural Evaluation, Analysis, and Design

- Modeling and analysis of cracked podium slab: Denver, CO
- Review of staged stressing sequence for complex post-tensioned structure: Austin, TX
- Analysis of steel roof-superstructure and rigging structure of 18,500 seat arena: San Juan, PR
- Analysis of cement silo roof collapse: Miami, FL
- Analysis of precast parking garage: Georgetown, TX

Destructive and Non-Destructive Testing

- Shear testing of full-scale prestressed concrete bridge girders: Austin, TX
- Verifying slab top cover in an eight-story building: Kirkland, WA
- Ground penetrating radar scanning for ABIA Expansion: Austin, TX
- Bond pull-off testing of various materials

REGISTRATIONS

Texas, P.E. License No. 122260

EDUCATION

The University of Texas at Austin
M.S. Structural Engineering, 2012

Missouri University of Science & Technology
B.S. Civil Engineering, 2010

PRACTICE AREAS

- Litigation Support
- Forensic Investigation
- Structural Evaluation, Analysis, and Design
- Repair and Remediation
- Destructive and Non-Destructive Testing

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- Structural Engineers Association of Texas (SEAoT)