



PERSONNEL QUALIFICATIONS

B. Lee Lawrence | Principal, Director of Practice Development, and South Region Director



EDUCATION

- University of Texas at Austin
 - Bachelor of Science, Civil Engineering, 1986
 - Master of Science, Civil Engineering, 1998

PRACTICE AREAS

- Construction Troubleshooting
- Concrete Deterioration
- Failure Investigation
- Materials Investigation
- Prestressed and Post-Tensioning
- Repair and Rehabilitation Design
- Research and Testing
- Water Penetration Testing

REGISTRATIONS

- Professional Engineer in TX

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Concrete Institute - Central Texas chapter, former president
- American Society of Civil Engineers, former chair of Forensics Committee
- Precast/Prestressed Concrete Institute

CONTACT

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EXPERIENCE

Since joining WJE in 1999, Lee Lawrence's consulting activities have included investigating and designing repairs for deterioration, distress, or failure of structures and a wide variety of constructional materials. His assignments have involved both new and existing structures including parking garages, single- and multi-story buildings, residential structures, masonry cladding systems, piers, slabs-on-grade, floor covering systems, municipal utility structures and pipelines, concrete industrial tanks, and pavements. Mr. Lawrence also has extensive experience in evaluating concrete material problems associated with strength deficiencies, environmental and chemical deterioration, and material incompatibility, utilizing petrographic, chemical, and analytical diagnostic methods.

Prior to joining WJE, Mr. Lawrence was with the Texas Department of Transportation (TxDOT) for more than eleven years, where he served as director of the Precast Concrete Branch of the Materials and Tests Division. While at TxDOT, he gained experience in design and construction of transportation structures, concrete technologies, concrete repair, material testing, and structural materials research.

REPRESENTATIVE PROJECTS

Failure Investigation

- Raw Water Pipeline - Central TX: Failure of a multimile pipeline
- Weslaco Cold Storage Unit - Weslaco, TX: Roof collapse
- Schlitz Beer Distribution Building - Austin, TX: Lamella wood roof system collapse
- Samsung Central Utility Buildings - Austin, TX: Liner and wall breach in concrete acid pit
- Pfluger Pedestrian Bridge - Austin, TX: Cracking in decorative concrete topping slab

Materials Investigation

- I-5 Undercrossing - Santa Clarita, CA: Assessment of fire-damaged concrete
- California DOT: Development of mitigation measures for alkali-silica reactivity
- Houston Street Viaduct - Dallas, TX: Condition assessment for historic viaduct (with HNTB)
- Texas DOT - Austin: Concrete diagnostic services

Repair and Rehabilitation Design

- Continuum Parking Garage - Austin, TX: Assessment and mitigation of premature concrete deterioration
- Fort Hood Control Tower - Fort Hood, TX: Repair design for fixed-wing aircraft control tower
- The Reserve on South Congress Parking Garage - Austin, TX: Structural analysis; conceptual repair and strengthening design
- Summit Condominiums - South Padre Island, TX: Corrosion distress evaluation and repair design
- Villas on Travis - Austin, TX: Water penetration and structural deterioration assessment and repair design

Research and Testing

- Concrete repair materials evaluation
- ASR susceptibility of concrete aggregate
- AWWA C303 Bar-Wrapped Pipe: Testing for load-deflection response characteristics
- Assessment of freeze-thaw properties of concrete

TECHNICAL COMMITTEES

- PCI Concrete Materials Technologies
- PCI Plant Certification/Personnel Training