

Trevor H. Moore | Associate III



EDUCATION

- Purdue University
 - Bachelor of Science, Civil Engineering (structural focus and honors college), 2019
 - Master of Science, Civil Engineering (structural focus), 2020

PRACTICE AREAS

- Concrete and Steel Materials and Structures
- Corrosion, Service Life, and Nondestructive Evaluation
- Failure/Damage Investigations
- Instrumentation/Monitoring/Load Testing
- Repair and Rehabilitation Design
- Structural Analysis

REGISTRATIONS

- Professional Engineer in DC, MD, NJ, NY, RI, TX, and VA

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Institute of Steel Construction
- American Society of Civil Engineers
 - Aerospace Advanced Materials and Structures Committee
- Association for Materials Protection and Performance
- Structural Engineers Association

CONTACT

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EXPERIENCE

Trevor Moore specializes in the investigation, evaluation, repair, and strengthening of existing structures and materials, with a focus on concrete and steel assets. Before joining WJE, Mr. Moore performed design services, construction administration, and commissioning on a range of advanced production, industrial, testing, and launch facilities for an aerospace firm. He developed expertise in structural design and numerical analysis in extreme temperature, pressure, and acoustic environments with conventional and advanced metallic, cementitious, and composite materials. This included ballistic, cryogenic, energetic, and structural proof testing.

While completing his studies, Mr. Moore researched ductile behavior of high-strength reinforcing steel, bridge asset management tools, and autonomous vehicle pathing/network optimization. He was recognized with several awards, including the 2019 American Society of Civil Engineering New Face of Civil Engineering award.

REPRESENTATIVE PROJECTS

Concrete and Steel Materials and Structures

- Suspension Bridge - Southern VA: Inspection, evaluation, physical and vibration testing, and repair recommendations for out-of-alignment 1970s steel cable suspension bridge
- Bridge Asset Management - US: Multiple asset management evaluation reports, operational reviews, and assessments
- Routine Bridge Inspection - MD: Multiple fracture critical bridge assessments

Corrosion, Service Life, and Nondestructive Evaluation

- Tidal Bridge - Horry County, SC: Destructive and nondestructive evaluation of multispan pre-stressed concrete bridge
- Concrete Airport Runway Paving - Eastern MI: Inspection, acoustic, ultrasonic shear tomography (MIRA), ground penetrating radar, and ultrasonic pulse velocity tools of runway pavement

- Multiple Buildings - Los Angeles, CA: Investigation of voiding and bar shadowing in varied concrete elements (cast and shotcrete) using MIRA, ground penetrating radar, and ultrasonic pulse velocity tools

Failure/Damage Investigations

- Precast Concrete Warehouse - Chesapeake, VA: Inspection and evaluation of structural components for 1970s vintage concrete and steel warehouse structures
- Medical Facility - Austin, TX: Litigation support for new steel-framed building

Instrumentation/Monitoring/Load Testing

- International Airport - Northern VA: Vibration and displacement monitoring and evaluation of structural steel bridge system
- Steel Bridge - Summersville, WV: Instrumentation and diagnosis of multi-span steel truss bridge with superstructure and joint alignment issues
- Museums - Baltimore, MD, College Park, MD, and Richmond, VA: Vibration and acoustic monitoring of sensitive art and cultural artifacts in museums during construction
- Precast Parking Garages - US: Load testing of precast concrete flange connections; assessment of failed connections and flanges
- Library Roof - Washington, D.C.: Inspection and multidirectional load testing of fall-arrest roof anchors
- Balcony Railing Load Testing - Alexandria, VA: Assessment and load testing of apartment building balcony railings

Repair and Rehabilitation Design

- Luxury Hotel - Surfside, FL: Evaluation, analysis, and repair of aluminum trellis
- Airport Runway Tunnels - Buffalo, NY: Assessment and repair design of multiple in-service concrete and steel tunnels beneath airport runway

Structural Analysis

- Warehouse - Gonzales, TX: Investigation, analysis, and design for retrofitted precast tilt wall concrete and steel structure
- Parking Garage - Springfield, IL: Analysis and sensitivity model of concrete column joint repairs for structural response