PERSONNEL QUALIFICATIONS

Luke Traverso | Associate III

EDUCATION

- Case Western Reserve University
  - Bachelor of Science, Civil Engineering, 2021
  - Master of Science, Civil Engineering, 2022

PRACTICE AREAS

- Vibration Monitoring and Analysis
- Testing and Instrumentation
- Laboratory Testing
- Structural Evaluation
- Condition Assessment

CONTACT

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EXPERIENCE

Luke Traverso is engaged in various projects, including vibration analysis of healthcare and energy facilities, structural health monitoring and instrumentation of bridges and buildings, structural evaluation, load testing, and laboratory testing. He has conducted condition assessment surveys of historic buildings, museums, and bridges. Mr. Traverso has an interest in human-induced vibrations, vibrations of heavy machinery, data acquisition systems, structural health monitoring, data visualization, software development, acoustics, and structural analysis.

REPRESENTATIVE PROJECTS

Vibration Monitoring and Analysis

- Surgery Center - Chicago, IL: In-situ vibration testing of concrete floor system and vibration remediation design
- Natural Gas Manufacturing Plant: In-situ vibration monitoring and analysis of air-cooled condenser units and vibration remediation design
- Art Institute of Chicago - IL: In-situ vibration and sound monitoring of structure during adjacent NASCAR races
- Stadium Evaluation: Vibration assessment of human-induced vibrations in stadium rakers with mode shape and frequency analysis
- Texas Tech University - Lubbock: Vibration evaluation of concrete slab for sensitive laboratory equipment
- Reparatory Theater - Indianapolis, IN: In-situ vibration and sound monitoring of human-induced vibrations
- Solar Farm - IN: Vibration assessment of existing solar structures to determine vulnerability to wind-induced vibrations
- Aluminum Curtain Wall - Orlando, FL: Vibration and sound assessment of popping noises
- Hennepin Avenue Bridge - Minneapolis, MN: Load estimation in suspension bridge cables via natural frequency method
- National Medal of Honor Museum - Arlington, TX: Load estimation of staircase steel hanger rods using frequency method
- Lithium Battery Manufacturing Plant: In-situ vibration assessment of structural dynamic response to manufacturing line operation

Testing and Instrumentation

- US218 Bridge - IA: Vibration, tilt, and displacement monitoring of bridge during adjacent construction
- State Street Bridge - Chicago, IL: Strain gage installation and bridge balance testing
- Michigan Avenue Bridge - Chicago, IL: Strain gage installation and bridge balance testing
- BNSF Rail Bridge - Memphis, TN: In-situ strain and relative displacement measurements of rail bridge
- Parking Garage - Houston, TX: In-situ load testing of carbon fiber and epoxy-injected repaired, prestressed concrete double-tees
- MGP Remediation - DeKalb, IL: Vibration, tilt, and in-place-inclinometer monitoring during construction

Laboratory Testing

- Proprietary Pallet Frame Testing - Northbrook, IL: Full-scale cyclic lateral testing of three-story, light-gage steel-braced frame structure
- Post-Installed Concrete Anchoring Systems - Northbrook, IL; ASTM E488/E1512

Structural Evaluation

- I-90 - IN: Bridge deck overhang extension analysis
- Bowstring Truss Failure - Chicago, IL: Failed wooden truss investigation, modeling, and analysis

Condition Assessment

- F.A.I. 270 Chain of Rocks - St. Louis, MO: Pre-, interim-, and post-construction surveys and vibration monitoring of historic Old Chain of Rocks Bridge and Existing I-270 during adjacent construction
- Blommer Chocolate Factory - Chicago, IL: Concrete floor structural condition assessment and crack mapping
- I-30 - IA: Condition assessment and vibration and tilt monitoring of three steel girder bridges during adjacent construction
- Union Pacific Railroad Bridge - IA: Condition assessment, vibration, and tilt monitoring of pier during rehabilitation activities