PERSONNEL QUALIFICATIONS

Kathleen A. Hawkins | Associate III

EDUCATION

- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Civil Engineering, 2016
  - Master of Science, Civil Engineering, 2018

PRACTICE AREAS

- Durability Assessment
- Laboratory Evaluations
- Construction Materials
- Bridges and Civil Infrastructure

REGISTRATIONS

- NACE Coating Inspector Level I

PROFESSIONAL AFFILIATIONS

- American Society for Testing and Materials (ASTM)
- Association for Materials Protection and Performance (AMPP)

TECHNICAL COMMITTEES

- ASTM C01 - Cement

CONTACT

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EXPERIENCE

Since joining WJE in 2018, Ms. Hawkins has worked on projects related to bridge condition assessment and maintenance, service life assessment, and laboratory testing of construction materials. Additionally, she has contributed to a variety of sponsored applied research projects and has experience in concrete and steel degradation and the preservation and development of construction materials.

Prior to joining WJE, Ms. Hawkins conducted graduate research focused on measuring and manipulating the rheological properties of fresh concrete for applications in 3D-printed concrete. During her studies, Ms. Hawkins focused on construction materials and sustainable and resilient infrastructure systems.

REPRESENTATIVE PROJECTS

Durability Assessment

- Underground Fuel Storage Tanks: Corrosion assessment of steel lining of buried, reinforced concrete tanks
- Bored Tunnel - VA: Development of concrete durability plan for bored tunnel
- Chicago Transit Authority - IL: Development of durability plan for elevated rail structure; service life evaluation of steel elements

Laboratory Evaluations

- Hancock Building Pool Coating - Chicago, IL: Root cause evaluation of distress observed in coating on a steel pool
- Sam Rayburn Dam Substation - Jasper, TX: Investigation of cause of concrete distress observed in transmission tower supports

Construction Materials

- Evaluation of Agricultural By-Product Material: Laboratory testing of agricultural by-product for potential reuse in concrete and asphalt applications
- GPRM Prestress, LLC - HI: Quality testing and product evaluation of concrete mixtures
- ASTM C150 and C618 Material Testing: Quality testing of cements and supplementary cementitious materials
- ASTM A775/D3963 Material Testing: Compliance testing of epoxy coatings and patch materials for reinforcing steel

Bridges and Civil Infrastructure

- IADOT/FHWA Report No. 4520A Bridge Deck Preservation Portal - Phase 1: Development of algorithm for selecting asset- or project-level bridge deck maintenance
- MDT Project MDT-313265 Evaluation of Thin Polymer Overlays for Bridge Decks - MT: Performance evaluation of thin polymer overlays and synthesis of state of practice regarding polymer overlays and high-friction surface treatments
- IHRB Project TR-791 Bridges Designed for Minimum Maintenance - IA: Analysis of bridge maintenance needs and evaluation of potential design/construction strategies minimizing maintenance
- IHRB Project TR-782 Guide to Remediate Bridge Deck Cracking: Development of systematic decision matrix and supplementary materials on selecting and executing effective bridge deck crack repairs
- IHRB Project TR-775 Late Life Low-Cost Deck Overlays: Identification of alternative and low-cost overlays for use on aged bridge decks
- NCHRP Synthesis 20-05/Topic 51-02 Design and Construction Practices for Durability, Ride, and Water Management of Bridge Approach Systems: Synthesis of current state practice for design, construction, and maintenance of bridge approaches
- SDDOT Project SD2019-03 Improvement of Approach Smoothness on Integral Abutment Bridges - SD: Assessment of causes of poor ride quality over bridge approaches and review of state of practice to identify preventive strategies for investigation
- B&O Bridge - East St. Louis, IL: Condition assessment of deck and concrete substructure of steel girder bridge
- Electric Utility Vaults - Chicago, IL: Condition assessment of reinforced concrete vaults