



#### EDUCATION

- University of Illinois at Urbana-Champaign
  - Bachelor of Science, Civil Engineering, 1984
  - Master of Science, Civil Engineering, 1986
  - Doctor of Philosophy, Civil Engineering, 1995

#### PRACTICE AREAS

- Construction Materials
- Sustainability
- Failure/Damage Investigations
- Litigation Consulting

#### REGISTRATIONS

- Professional Engineer in IL, MI, and NV

#### PROFESSIONAL AFFILIATIONS

- American Concrete Institute, Fellow
- American Concrete Pavement Association
- American Society of Civil Engineers
- Transportation Research Board

#### CONTACT

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#### EXPERIENCE

Thomas Van Dam joined WJE in 2023 with more than thirty-five years of civil engineering experience, specializing in concrete materials related to pavement and slab design, sustainability, and overall evaluation. His major areas of interest include performance assessment, durability, forensic investigations, and greenhouse gas emissions reduction.

Dr. Van Dam has worked successfully in academia and the private sector, directing pavement design, materials, and sustainability groups conducting investigative and research projects for federal agencies, state departments of transportation, local agencies, private industry, and nonprofit foundations. He has published more than one hundred technical papers, articles, and reports, and he is a frequent presenter on concrete materials and sustainability.

#### REPRESENTATIVE PROJECTS

##### Construction Materials

- Mitigation of Bridge Deck Cracking - Salt Lake City, UT: Coordination of a team of subject matter experts working with the Utah DOT, designer, and contractor to control cracking in newly constructed bridge decks as part of the West Davis Corridor project
- FHWA Performance Engineered Mixtures: Development of performance engineered mixtures procedures resulting in adoption of AASHTO R 101 \*
- Integrated Materials and Construction Practices: Collaboration with the National Center for Concrete Pavement Technology to coauthor reference manual; taught materials to several DOTs \*
- Evaluation of Rapid Slab Repair and Replacement (RSRR) Strategies for Airfield Pavements: Airport Cooperative Research Program study to evaluate RSRR strategies employed at airports around the country resulting in publication of a guidebook \*

##### Sustainability

- Low Carbon Concrete Demonstration Projects: Collaboration with the ClimateWorks Foundation to demonstrate feasibility of using lower carbon concrete

- Identifying and Addressing Barriers to Adoption of Low Carbon Concrete: Support of Breakthrough Energy Foundation in the development and adoption of sensible low carbon concrete specifications to support industry change
- FHWA Sustainable Pavements Program: Promoting adoption of sustainable pavement practice and author guide documents

##### Failure/Damage Investigations

- Impacts of Diamond Grinding on Long-Term Performance of Airfield Pavements: Evaluation of diamond-ground airfield pavements to investigate risk of future foreign object damage potential
- SR-91 CAPM Pavement Restoration Project - Orange County, CA: Recommendations on concrete pavement restoration
- Aquatic Center Flatwork - Elk Grove, CA: Investigation of random early cracking and spalling of newly constructed flatwork

##### Litigation Consulting

- Amberley RAAF C-17 Apron Investigation - Amberley, Queensland, Australia: Support in dispute involving concrete slab cracking
- Mesa Verde Minor Concrete Failure - Mesa Verde National Park, CO: Assistance to FHWA Central Federal Lands in dispute involving minor concrete failures
- Concrete Runway Random Cracking Investigation - Fort Bliss, NM: Support of U.S. Army Corps of Engineers in dispute regarding random cracking of newly constructed concrete runway \*

##### TECHNICAL COMMITTEES

- ACI 90 - Technical Activities
- ACI 130 - Sustainable Concrete
- ACI 201 - Durability of Concrete
- ACI 232 - Fly Ash
- ACI 240 - Natural Pozzolans
- ACI 325 - Concrete Pavements

\* Indicates with previous firms