



Peter Foster

PRINCIPAL ENGINEER & GROUP DIRECTOR, STRUCTURAL & TRANSPORTATION LABORATORY

Peter Foster serves as Principal Engineer and the Group Director for the Structural & Transportation Laboratory of CTLGroup leveraging his technical expertise in structural behavior, instrumentation, load testing, product development and post-installed concrete. His responsibilities include administration of the laboratory, management of projects within the laboratory and developing new areas of services within the laboratory including concrete anchorage components. Additionally, Mr. Foster provides knowledge of nondestructive testing, analytical investigation, structural optimizations and physical testing of structural components and systems of civil / structural materials. Using prior experience in FEA modelling and total system modelling and testing, he has assisted in component refinements and improvements.

Mr. Foster's recent (15+ years) focus has been centered on qualification programs for cast-in-place and post-installed concrete anchorage systems, advanced building systems incorporating 3D printing, and various other civil and mechanical components. Adhering to applicable structural / physical testing specifications, such as ASTM, ICC, ETAG and ACI, he has performed qualification testing and evaluation programs for numerous products and systems in a wide array of materials.

Academic Credentials

M.S. in Civil Engineering
University of North Carolina-
Charlotte, 2003

B.S. in Civil Engineering
University of North Carolina-
Charlotte, 2001

Professional Affiliations

Concrete Anchor Manufacturers
Association (CAMA)

American Concrete Institute
(ACI)

Contact Information

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Representative Project Experience

Qualification Testing

- Performed qualification and acceptance testing for a wide range of cast-in-place and post-installed concrete anchorage systems, 3D printed concrete structural systems as well as other building systems and components for civil and mechanical service areas.
- Authored extensive, performance-based reports based on physical testing results and analytics.
- Provided optimized testing schedules for large scope qualification programs reducing time-to-market for product manufacturers.
- Assisted product manufacturers through the qualification process and provided feedback through iterative testing.

In-situ Assessments, Load Testing & Monitoring

- Developed and implemented a short-term monitoring program designed to estimate the remaining service life of an exposed, elevated reinforced concrete waffle slab system.
- Performed in-situ load testing of reinforced concrete systems in accordance with ACI specifications.
- Utilized a variety of nondestructive evaluation techniques to assess the as-built condition or structures, internal defects or delamination's as well as providing insight into construction errors or omissions.

Investigations & Design

- Successfully used Finite Element Modelling (FEA) to determine performance of steel connections subject to alterations in loading conditions from design. Predicted performance and capacities of FRP reinforced masonry shear walls subject to in-place cyclic shear loading.
- Designed and implemented a structural laboratory used for the physical testing and characterization of structural components and systems.
- Performed investigative studies on manufacturing techniques and changes to materials and/or products to assist product manufacturers in decision-making.
- Completed root cause analyses of performance deficiencies for structural components.