PERSONNEL QUALIFICATIONS

Demiana Tse | Associate III

EDUCATION

- Carleton University
  - Bachelor of Engineering, Architectural Conservation and Sustainability, 2020
- Universidade do Minho
  - Master of Science, Structural Analysis of Monuments and Historical Conservation, 2021

PRACTICE AREAS

- Repair and Rehabilitation
- Masonry Structures
- Failure/Damage Investigation
- Historic Preservation
- Structural Evaluation

REGISTRATIONS

- Professional Engineer in Ontario

PROFESSIONAL AFFILIATIONS

- ICOMOS Canada
- The Masonry Society

CONTACT

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EXPERIENCE

Demiana Tse is engaged with various projects related to structural engineering and building enclosures. Her responsibilities include evaluation and investigation of damaged structures, development of repair and rehabilitation documents, and construction administration services. Ms. Tse has completed projects with a variety of materials, including stone masonry, brick masonry, rammed earth, wood, and concrete.

While attending the University of Minho, Ms. Tse completed her master's thesis, which examined the performance of an earthen masonry structure under blast and impact loading. Prior to joining WJE, Ms. Tse worked in Canada's Science and Parliamentary Precinct Branch, where she participated in the project implementation of a heritage rehabilitation project.

REPRESENTATIVE PROJECTS

Repair and Rehabilitation

- Westin Parking Garage - Boston, MA: Construction administration for post-tensioning and concrete repairs
- Park Lane Parking Garage - Boston, MA: Development of drawings and construction administration for concrete repairs
- Connemara Senior Living - Brockton, MA: Development of repair drawings for open web steel joist deck
- Harbor Towers - Boston, MA: Construction administration services for concrete facade repairs
- 200 Berkeley Street - Boston, MA: Development of repair drawings and construction administration for facade repairs and paver replacement
- 50 Post Office Square - Boston, MA: Development of repair drawings and construction administration for sealant replacement and limestone masonry repairs
- Omni Parker House Hotel – Boston, MA: Development of repair drawings for brick, limestone, granite, and stucco facade
- 2 Hampshire Tower - Lawrence, MA: Development of concrete repairs and steel lattice structure demolition
- East Block of Parliament Hill - Ottawa, ON: Rehabilitation and replacement of heritage masonry, window and door openings, copper roofing, and ironwork *

Failure/Damage Investigation

- Edison Plant - Boston, MA: Investigation of work platform collapse
- Budget Inn - Mayfield, KY: Investigation of tornado damage

Historic Preservation

- Granary Burying Ground - Boston, MA: Investigation and repair drawings for 1600s brick masonry site wall
- The Country Club - Brookline, MA: Building enclosure condition assessment an 1890s timber building
- 96–13th Street - Charlestown, MA: Exterior condition assessment of two brick masonry structures
- Old South Meeting House - Boston, MA: Building enclosure water leak investigation
- Temple City of Bagan A - Bagan, Myanmar: Documentation of historic monuments using photogrammetry and 3D laser scanning *

Structural Evaluation

- Fish Creek - Warwick, PA: Evaluation of the structural capacity of concrete wastewater tanks
- McGuire Airforce Base - Burlington County, NJ: Evaluation of light pole performance under high winds
- Landmark Center - Boston, MA: Evaluation of building settlement due to adjacent excavation
- One Financial Center - Boston, MA: Feasibility study of an existing roof for a proposed roof deck
- Alhambra's Rorre de la Vela O Grenada, Spain: Blast analysis of a UNESCO rammed earth tower using finite element modelling *

**Indicates work previous to WJE*