

**Position:** SENIOR PRESERVATION ENGINEER (STRUCTURAL) Full-time employee

**Location:** Minneapolis, Minnesota

MBJ is recognized for having the Twin Cities' premier preservation engineering practice. Projects include State Capitol renovations, historic theaters, large industrial projects, cathedral and small church renovations, and historic building stock modifications into modern commercial spaces. Evaluations include mid and late-19th century vernacular buildings, historic ruins, large industrial mill and power-plants, and ornate decorative elements. The Preservation Engineering Practice emphasizes an understanding of the historic materials and systems to help ensure an understanding of the building's past and future behavior.

### Description

- Participate as a SENIOR PRESERVATION ENGINEER in a variety of existing and historic building projects, to include forensic evaluation, material preservation and repair designs, and building modification and adaptive reuse designs
- Lead small, medium, and large-sized projects
- Lead a project from existing construction evaluation through written and oral explanation of findings and recommendations, coordination with other disciplines during the design of repairs/modifications, and coordination with contractors during construction

### Required Qualifications

- Academics: B.S. degree in Structural or Civil Engineering
- Licensure: P.E. or S.E.
- General structural engineering experience: Minimum of 8 years designing building structures
- Specific preservation engineering experience: Minimum of 5 years in preservation engineering with demonstrated knowledge in archaic building systems

### Desired Qualifications

- Academics: M.S. degree in Structural or Civil Engineering
- Preservation training: Coursework specific to preservation engineering
- Archaic material knowledge: Historic construction techniques such as arch construction (shallow and flat-tile); terra-cotta, brick and stone construction; unreinforced masonry; early proprietary steel and iron systems; and early wood structures (heavy timber and dimensional lumber)
- Modern material knowledge: Familiar with structural systems and their detailing for typical structural materials including soils, concrete, steel, masonry, and wood
- Non-structural material knowledge: Ability to understand interfacing non-structural systems and anticipate their interaction with structural systems and critical load paths
- Building codes: Familiar with the International Existing Building Code (IEBC) as well as current design and material codes (IBC, ACI, AISC, NDS, etc)
- Forensic engineering skills: Ability to diagnose building distress such as the consequences of structural movement, water infiltration and the freeze/thaw cycle on large and small structures

- Engineering software: Fluent in MS Office suite, Mathcad, Risa and RAM. An understanding of Finite Element Modeling is preferred.
- Drafting software: Familiar with Revit software modeling process and ability to navigate, cut sections, and perform “mark-up” modifications in the model
- Project management skills: meeting key deadlines, managing design budgets, directing younger engineers and CAD technicians, and representing MBJ to clients and outside consultants. In addition, candidates should have strong communication skills, both oral and written; strong interpersonal skills with MBJ staff, clients, architects, and other design disciplines and contractors.

**Benefits**

- Competitive pay and benefits commensurate with experience and qualifications, including health, dental, disability, flex-benefits, 401k, mass transit assistance, continuing education, flexible schedule, etc.
- Flexibility to shape your career path and grow with the firm
- Ability to work with stimulating colleagues on a daily basis in an environment that is challenging, fun and promotes individual growth, teamwork, and creativity

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