



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, MassDOT Secretary & CEO



Internal/External Job Posting

Requisition #: 1800024P
Posting Date: April 9, 2018
Closing Date: Open Until Filled
Official Title: Civil Engineer IV
Functional Title: Senior Bridge Rater
Location: State Transportation Building – 10 Park Plaza, Boston
Bridges and Structures Section
Vacancies: 1
Salary: \$70,218.20 – \$98,310.94
Schedule: Full-Time
Shift: Day
Bargaining Unit: E
HR Generalist: Robin Burke
Diversity Officer: Derrick Mann – 857-368-8541
ADA Coordinator: John Lozada – 857-368-8541

Duties & Responsibilities:

Incumbents of this position perform the function of a Senior Bridge Rater in the Ratings/Overload Unit of the Bridge Section and are responsible for the following duties:

1. Performs structural analysis of bridges of substantial complexity in order to determine the live load capacity of these structures using AASHTO bridge specifications and MassDOT guidelines and standards and prepares bridge ratings reports for these bridges.
2. Reviews rating reports for bridges of substantial complexity prepared by Consultants including the structural analysis and live load capacity calculations using AASHTO bridge specifications and MassDOT guidelines and standards.
3. Evaluates and recommends alternatives for improving the live load capacity of existing bridges through the review of available data, bridge rating calculations and consultations with superiors.
4. Provides recommendations for posting bridges based on the incumbent's analysis and calculations or on the analysis and calculations prepared by Consultants.

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
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Duties & Responsibilities (continued):

5. Performs overload permit analysis calculations for bridges of substantial complexity using AASHTO bridge specifications and MassDOT guidelines and standards in order to determine if the overload vehicle can safely go over the bridge or not, and if restrictions need to be placed on it in order to allow it to go over the bridge.

6. Reviews overload permit analysis calculations for bridges of substantial complexity prepared by Consultants using AASHTO bridge specifications and MassDOT guidelines and standards and determines based on this review if the overload vehicle can safely go over the bridge or not, and if restrictions need to be placed on it in order to allow it to go over the bridge.

7. Prepares overload permit memos to be forwarded to the MassDOT Commercial Motor Vehicle Center to be included in the official permit. These memos are based either on the incumbent's analysis and calculations or on the analysis and calculations prepared by Consultants and which summarize the results of this analysis and outline the restrictions that need to be placed on the overload vehicle as a condition of the being allowed to go over the bridges on the proposed route.

Preferred Qualifications at Hire for this position:

Knowledge of the principles and practices of structural engineering.

Knowledge of the terminology and standard abbreviations used in bridge design and rating.

Knowledge of the structural analysis methods and mathematical computations used in solving structural engineering problems as they relate to bridge design and rating.

Knowledge of the mechanical properties and characteristics of steel and concrete as used in bridge construction.

Working knowledge of the AASHTO LRFD Bridge Design Specifications and the AASHTO Manual for Bridge Evaluation.

Working knowledge of the MassDOT Bridge Manual.

Working knowledge of the AASHTOWare Bridge Rating (VIRTIS) software.

If you have questions regarding this position, please contact the Human Resources Generalist Robin Burke at 857-368-8505.

Minimum Entrance Requirements:

First consideration will be given to those applicants that apply within the first 14 days.

Applicants must have at least (A) five years of full-time, or equivalent part-time, technical or professional experience in civil engineering work in such areas as construction, survey, design, transportation, hydraulics, structural, sanitary, drafting, environmental, highway, architectural, airport, soils and materials, of which (B) at least three years must have been in a professional capacity, and (C) of which at least one year must have been in a supervisory capacity, or (D) any equivalent combination of the required experience, and the substitutions below.

Minimum Entrance Requirements (continued):

Substitutions:

I. An Associate's degree with a major in civil engineering** or civil engineering technology** may be substituted for a maximum of one year of the required (A) experience.*

II. A Bachelor's degree with a major in civil engineering** or civil engineering technology** may be substituted for a maximum of two years of the required (A) experience.*

III. A Graduate degree with a major in civil engineering** may be substituted for a maximum of three years of the required (A) experience and one year of the required (B) experience.*

**NOTE: The terms civil engineering and civil engineering technology include related engineering disciplines, such as construction, survey, hydraulics, design, transportation, structural, soils, sanitary, environmental, drafting, highway, architectural, mining, airport and materials.

*Education toward such a degree will be prorated on the basis of the proportion of the requirements actually completed.

NOTE: Educational substitutions will only be permitted for a maximum of one year of the required (B) experience. No substitutions will be permitted for the required (C) experience.

SPECIAL REQUIREMENT: Based on assignment, possession of a current and valid Massachusetts Class D Motor Vehicle Operator's License may be required.

FOR NON-MassDOT APPLICANTS:

Applicants for this position must possess a Bachelor's Degree in an appropriate engineering discipline and E.I.T. certification or P.E. registration for appointment to this position.

FOR MassDOT EMPLOYEES:

Applicants for this position must possess a Bachelor's Degree in an appropriate engineering discipline and E.I.T. certification or P.E. registration for appointment to this position, or hold a position in the Department in one of the next two lower titles than the position applied for, in the same or similar career ladder.

An Equal Opportunity/Affirmative Action Employer. Females, minorities, veterans, and persons with disabilities are strongly encouraged to apply.