

**Boston Water and
Sewer Commission**



980 Harrison Avenue
Boston, MA 02119-2540
617-989-7000

Boston Water and Sewer Commission Job Description

Job Title: Design Engineer I
Salary: \$1346.16 – \$1798.61
Employment Type: Full-Time

Company Background:

Boston is home to New England’s oldest and largest and largest water & sewer systems, which are owned, maintained and operated by the Boston Water and Sewer Commission (BWSC). Established in 1977, BWSC continues to provide water and sewer services to more than one million residents, workers, students, shoppers, conventioners, hospital patients and visitors each and every day.

Position Purpose:

Performs professional and technical work related to the engineering activities of the Boston Water and Sewer Commission. Responsible for project management and engineering design and ensures that quality standards and inspections are obtained.

Essential Functions:

(The essential functions or duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.)

- Researches historical data in order to establish the work limits for water and sewer work; reviews sewer and drain inspection TV tapes for completeness and to identify required repairs needed and other alternatives.
- Performs field surveys of existing conditions by using GPS, Total Station and Level; Converts field data to AutoCAD Civil 3D and confirm surveys.
- Surveys buildings to verify existing service information.
- Investigates and resolves any field issues as required.
- Reviews base plans of existing utilities as prepared by CAD Technicians.
- Prepares project analysis using hydraulic engineering software.
- Drafts proposed work on base plans by using AutoCAD Civil 3D.
- Reviews proposed plans with supervisor and Chief Engineer.
- Sends written notices and proposed plans to utilities and concerned parties for review and comment.
- Submits permit applications as required by the work; prepares specifications.
- Performs quantity takeoff and prepares engineer’s estimate; prepares final plans for final review.
- Prepares Annual Operation Contracts.
- Prepares Commission Transmittal Memos for Permission to advertise and award contracts.

- Prepares technical reports and memoranda, evaluating investigations of special projects.
- Evaluates designs submitted for review by other agencies, consultants, developers and utilities.
- Prepares Traffic Management Plans if required.
- Prepares MWRA PAP applications for financial assistance from the MWRA if required.
- May be required to manage specific office operations such as managing equipment, maintaining databases, etc.
- Performs engineering investigations and recommendations relating to the operation and maintenance of the sewer and water systems.
- Performs similar or related work as required, directed or as situation dictates.

Recommended Minimum Qualifications:

Education, Training and Experience:

Bachelor's Degree in Civil Engineering or Civil Engineering Technology. Two (2) years' experience with water and sewer systems or similar municipal infrastructure projects; Fundamentals of Engineering Certificate; Must possess a valid Massachusetts Driver's License.

Knowledge, Ability and Skill:

Knowledge: Knowledge of fundamental engineering principles in designing sewer, drain and water construction projects. Knowledge of the application of scientific, engineering and management principles to the analysis of engineering problems and designs solutions. Expert knowledge in interpreting technical reports and drawings, preparing designs with the use of AutoCAD, and reviewing construction drawings, specifications, contract documents and contract estimates. Familiarity with field surveys and survey's equipment. Basic knowledge of drafting. Working knowledge of engineering computer applications. Working knowledge of local and state regulations.

Ability: Ability to perform complex technical research and to compile comprehensive reports; ability to handle the practical application of findings, assess conditions in a variety of locations and determine proper course of action needed. Deals effectively and diplomatically with consultants, officials, department heads and other constituencies.

Skill: Strong interpersonal skills. Excellent written and verbal communication skills. Proficient computer skills including MS Office applications and specialized software including AutoCAD and HydroCAD. Skill in operating the listed tools and equipment.

PLEASE NOTE: RESIDENCY IN THE CITY OF BOSTON IS A REQUIREMENT AT THE TIME OF HIRE.

Please complete on-line application with resume at: http://www.bwsc.org/ABOUT_BWSC/employment/employment.asp.

Affirmative Action/Equal Employment Opportunity Employer