



Birmingham Water Works Job Description

Job Title: Senior Engineer - Civil

Department: Engineering - 910

**Reporting Relationship: Principal Engineer and/or
Chief Engineer**

Exempt Status: Exempt

Grade: 45

General Responsibilities:

Plans, develops, coordinates and directs engineering projects as assigned. Performs work, which involves conventional engineering practices but may include a variety of complex features such as conflicting design requirements, unsuitability of conventional materials and difficult coordination requirements

Work requires a broad knowledge of precedents in the specialty area and a good knowledge of civil engineering specialties

Essential Job Functions:

1. Performs civil engineering for capital construction and maintenance projects on pumping stations, filter plants, storage facilities, wells, reservoirs and other water works facilities and equipment; researches and plans future system and facilities requirements
2. Project Manager for design projects and construction projects designed in-house and by engineering consultants.
 - Provide project management of various projects related to civil and infrastructure systems on water works facilities and equipment.
 - Design and provide project management of various projects such as pumping stations, pressure reducing stations, tanks, clarifiers, lift stations, major water mains, and other improvements.
 - Prepare equipment specifications required by the facility or the Purchasing Department. Perform bid openings and prepare bid tabulation for approval.
 - Prepare a scope of work, contract documents and specifications for bidding and procuring equipment and annual bids for stock materials and items.
 - Write requisitions and coordinate with the Purchasing Department and Accounting Department.
 - Develop project estimates and establish budgets, enter work orders and close projects
 - Coordinate and review work performed by consulting engineers.
 - Coordinate and review work performed by contractors.
 - Prepare budgets, enter work orders and close projects.
 - Apply for permits through city, county, state and regulatory agencies; visit and inspect work sites.
3. Experience and working knowledge of civil design, construction, specification, installation, repair and maintenance
 - Experience and working knowledge of water transmission and storage applications, including pumps, clearwells, piping, reservoirs, etc.
 - Experience with and working knowledge of multiple pressure systems used by BWWB.
 - Ability to read and decipher regulations and industry codes, e.g. AWWA, OSHA, ASTM and ANSI, and explain requirements of same to others.
 - Technical knowledge of civil systems engineering calculations, construction methods and materials.
 - In-depth knowledge of hydraulic principles, including those for storage and distribution of water supplies.
 - Experienced in civil construction and inspection in areas such as concrete, steel, soils, paints and coatings, piping, etc.

4. Project Manager for Water Quality Initiatives (WQI), which includes influences on watershed management, treatment management, distribution system management and piloting at bench scale.
 - Review current rules and regulations affecting the water treatment plants and determine the method or solution to achieve the new rules and regulations if out of compliance.
 - Perform erosion control inspections on project sites and ensure compliance with guidelines and permitting agencies.
 - Apply for permits through city, county, state and regulatory agencies (i.e. ADEM); visit and inspect work sites.
5. Coordinate and supervises the performance of field tests and technical investigations of BWWB water systems.
 - Prepare or assist in preparation and review of studies that determine the present load, demand, efficiency cost and condition and provide for planning to meet future demands of the overall water and wastewater systems.
 - Review technical investigations of specific portions of the water system based on field test data.
 - Coordinate various field tests such as water main tests, fire hydrant flow tests, large meter calibration tests, stream flow, pump tests and customer flow tests and the preparation of data indicating the results of the tests performed.
 - Perform erosion control inspections on project sites and ensure compliance with guidelines and permitting agencies.
6. Assist other departments with engineering needs including information on equipment and system operation and maintenance.
7. Ability to manage multiple priorities and possess good organization, facilitation and group coordination skills.
8. Ability to engage and work with all levels, including contractors, consultants and employees.
9. Strong verbal and written communication skills.
10. Perform other duties as assigned.

MINIMUM QUALIFICATIONS

Education:

Bachelor of Science Degree in Civil or Mechanical Engineering or related field as required. Advanced degree preferred.

Experience:

Five years of related engineering design, construction engineering and project management experience as a Licensed Professional Engineer and two years in a related supervisory capacity
Project Management, CADD, Survey Distribution, Pump Station, Treatment, and Structural Design

Supervision:

Five years experience in supervising, planning, organizing, scheduling, assigning and evaluating the work of paraprofessional and technical employees

Certificates, Licenses, Registrations:

Licensed Professional Engineer (P.E.) in the State of Alabama or the ability to obtain such by Comity
Valid Alabama Driver License

COMPETENCIES:

To perform the job successfully, an individual should demonstrate the following competencies:

Design

- Generates creative solutions;
- Translates concepts and information into images;
- Uses feedback to modify designs;
- Applies design principles; Demonstrates attention to detail.

Problem Solving

- Identifies and resolves problems in a timely manner;
- Gathers and analyzes information skillfully;
- Develops alternative solutions;
- Works well in group problem solving situations;
- Uses reason even when dealing with emotional topics.

Written Communication

- Writes clearly and informatively;
- Edits work for spelling and grammar;
- Varies writing style to meet needs;
- Presents numerical data effectively;
- Able to read and interpret written information.

Organizational Support

- Follows policies and procedures;
- Completes administrative tasks correctly and on time;
- Supports organization's goals and values;
- Benefits organization through outside activities;
- Supports affirmative action and respects diversity.

Innovation

- Displays original thinking and creativity;
- Meets challenges with resourcefulness;
- Generates suggestions for improving work;
- Develops innovative approaches and ideas;
- Presents ideas and information in a manner that gets others' attention.

Planning/Organizing

- Prioritizes and plans work activities;
- Uses time efficiently;
- Plans for additional resources;
- Sets goals and objectives;
- Organizes or schedules other people and their tasks;
- Develops realistic action plans.

Physical Demands:

Ability to stand, walk or sit for extended periods or time

Reaching by extending hand(s) or arm(s) in any direction

Finger dexterity required in manipulating objects with fingers rather than with whole hand(s) or arm(s), for example, using a keyboard

Communication skills using the spoken word

Ability to see within normal parameters

Ability to hear within normal range

Ability to move about, to climb ladders and ladder ways

Working Environment:

Moderate Noise (Business Office) and construction site noise
Occasionally visit job sites, outdoors exposed to extreme hot/cold and or wet weather conditions

Revised 04/18

I acknowledge that I have read the job description for this position and can perform the essential functions of the job with or without reasonable accommodation. I also understand and will fulfill the duties, responsibilities and qualifications as listed in this job description.

Signature

Date