

SAN BERNARDINO MUNICIPAL WATER DEPARTMENT CLASSIFICATION SPECIFICATION

TITLE: PRINCIPAL ENGINEER

DATE: 12/15/09

JOB CODE: 51764

FLSA STATUS: EXEMPT

UNIT REPRESENTATION: MID-MGMT

Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the job.

DUTIES SUMMARY

Under general direction, to manage the planning and design of all Water Utility and Water Reclamation capital improvement designed in-house or by outside consultants; to assist in the planning, scheduling, supervision and administration of engineering personnel, resources, projects, and processes; to supervise and participate in the gathering and compiling of data and the preparation and review of designs, plans, estimates, specifications and reports for the construction, alteration and maintenance of water utility, water reclamation, hydro-generation and geothermal systems; and to perform related work as required.

DISTINGUISHING CHARACTERISTICS

The class of Principal Engineer is the advanced professional level class in the engineering, series. Supervision is received from the Engineering Manager. Supervision may be exercised over Engineering Section staff. In the absence of the Engineering Manager, the Principal Engineer may act as his or her designee.

EXAMPLES OF DUTIES

The following duties are typical essential duties for positions in this classification. Any single position may not perform all of these duties and/or may perform similar related duties not listed here:

- Provide courteous and expeditious customer service to the general public and City Department staff;
- Routinely adhere to and maintain a positive attitude toward City and department goals;
- Plan, schedule, supervise, and administer engineering and geothermal personnel resources, projects, and processes;
- Supervise and participate in the preparation of designs and plans for water/wastewater system and geothermal additions and improvements such as reservoirs, pumping plants, pressure reducing/sustaining stations, water distribution and transmission mains, sewer lift stations, wastewater/water reclamation treatment processes (preliminary treatment, advanced primary treatment, biological nutrient removal secondary treatment, tertiary filtration, anaerobic digesters, sludge dewatering, cogeneration, oxidation ponds, chlorine contact basins, UV disinfection, etc.), buildings, and hydro generation installations;

- Formulate program definition and policy;
- Prepare design drawings in AutoCAD format in accordance with Department standards;
- Check design work in progress for accuracy and calculations and conformance with established engineering methods and procedures;
- Prepare technical specifications;
- Review completed designs, specifications, cost estimates, legal descriptions and related documents;
- Direct the preparation and maintenance of maps, drawings, engineering records and files;
- Calculate cost estimates;
- Calculate elevations and approve legal descriptions;
- Write construction orders and purchase requisitions;
- Provide engineering information to contractors, engineers and members of the public;
- Coordinate the compilation of data for audit reports;
- Resolve technical opinion conflicts of engineering personnel;
- Assist the construction management section with construction related issues;
- Take a lead role in management and coordination of consultants and/or sub-consultants; manage consultants who perform professional design services for accuracy of calculations and conformance with established engineering methods, procedures, and Department standards;
- Coordinate utility conflicts with other agencies and sub-consultants; coordinate field site visits to verify survey data;
- Ensure accurate documentation of designs and as-built drawings are to Department standards and placed on appropriate server and Document Management System (DMS);
- Assist the Engineering Manager in the maintenance and updates of Department AutoCAD standards and drawings;
- Work with the GIS Technology Coordinator on design drawing archiving, GIS mapping updates, and website postings;
- Review and approve the work of engineering staff;
- Develop, explain and implement policies, procedures and objectives of the unit to staff by written directive and by oral communications;
- Conduct staff meetings;
- Instruct assigned staff in work methods;
- Perform the more difficult work of the unit;
- Conduct studies and investigations, preparing reports of findings and recommendations;

- Compose correspondence requiring use of judgment based upon a thorough knowledge of the functions and procedures for review by supervisor;
- Temporarily carry out responsibilities and duties of the Engineering Manager when the Engineering Manager is unavailable;;
- Operate Department vehicles; and
- Perform related work as required.

QUALIFICATIONS

Any combination of education, training, and experience that would likely provide the knowledge, skills, and abilities to successfully perform in the position is qualifying. A typical combination includes:

Knowledge of:

- Basic principles of supervision;
- Methods of water utility and water reclamation engineering and construction;
- Federal and State safety water, wastewater, and environmental laws and regulations;
- Types and variety of equipment, tools, and materials used in water utility construction;
- Basic surveying;
- Appropriate safety precautions and procedures;
- Computer Aided Design and Drafting (CAD);
- Geographical Information System (GIS);
- Personal Computer Operation and standard office word processing, spreadsheet and database;
- Public relations and customer assistance;

Ability to:

- Assist in the Supervision, scheduling, and training of water utility/reclamation engineering staff;
- Read, understand and prepare complex engineering drawings, data, specifications, and contracts;
- Prepare clear and concise technical reports and cost estimates;
- Plan, organize, and administer the work of a unit of engineering technicians, draft persons and geothermal technicians;
- Conduct thorough investigations, organize data, and draw sound conclusions;
- Work in a CAD or GIS environment;

- Review and comment on environmental documents;
- Delegate responsibility to employees at the technical and professional level;
- Operate a vehicle observing legal and defensive driving practices;
- Understand and carry out complex oral and written instructions;
- Establish and maintain effective relationships with those contacted in the course of work;
- Stoop, bend, lift, and transport materials and supplies weighing up to 50 pounds;
- Climb in and out of construction project excavations;
- Work predominately inside; however, subject to a variety of outdoor environmental conditions of noise, vibrations, fumes, odors, dust, including inclement changing outdoor weather conditions.

MINIMUM QUALIFICATIONS

Education: Bachelor of Science Degree in Civil Engineering

Experience: Four (4) years of civil engineering experience

Certification: Must possess a valid Professional Engineer License (Civil) in the State of California at the time of application

And

Must obtain and maintain a State of California Department of Public Health Water Distribution Operator Grade D2 Certificate and a Water Treatment Operator Grade T2 Certificate within 36 months of hire date.

NECESSARY SPECIAL REQUIREMENTS

Must be able to respond to call-outs or emergencies including being on-call

Possession of a valid California Class "C" driver's license is required upon application. NOTE: For out-of-state applicants, a valid driver's license is required and a valid California driver's license is required within ten (10) days of appointment (CA Vehicle Code 12505c).

PHYSICAL TASKS AND ENVIRONMENTAL CONDITIONS

Work involves exposure to potential physical harm, hazardous chemicals, and infectious disease. There is frequent need to stand, sit, stoop, walk, and perform other similar actions during the course of the workday. Employee accommodations for physical or mental disabilities will be considered on a case-by-case basis.

Incumbents require sufficient mobility to work in an office setting and operate office equipment, transport materials and supplies weighing up to 50 pounds, and to travel to various locations. Must be able to see in the normal visual range with or without correction with vision sufficient to read small print, computer screens and other printed documents. Must be able to hear in the normal audio range with or without correction. Employee accommodations for physical or mental disabilities will be considered on a case-by-case basis.

CAREER LADDER

From: Principal Engineer

To: Engineering Manager

Job Description:

BOWC Approved:

9/5/2006

Revision Approved:

12/15/2009

Testing Standards: CS App Review/CS Supp App Review

: CSB Approved

9/8/2015