

Oro Loma Sanitary District  
2655 Grant Avenue  
San Lorenzo, CA 94580  
(510) 276-4700

## **FIELD ENGINEER**

### **DEFINITION**

Under general direction of the District Engineer, performs engineering work related to the design, investigation, and construction of wastewater and related projects; makes field inspections of a variety of construction projects including pipelines, pumping stations, treatment facilities, and capital improvement projects to insure conformance with approved plans, specifications and District regulations; acts as project manager and construction manager for assigned capital projects, and performs other related work as required.

### **DISTINGUISHING CHARACTERISTICS**

This is the journey level class in the engineering series not requiring registration. Incumbents of this class perform moderately difficult engineering work, under the supervision of a registered professional engineer.

### **IMPORTANT AND ESSENTIAL DUTIES**

- Design and prepare plans and specifications and cost estimates for District projects including lift stations, sewer mains, and related projects; maintain as-built drawings on projects under construction and after construction.
- Research project design requirements; perform complex calculations and prepare estimates of time and material costs.
- Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of goals.
- Design and maintain spreadsheets and databases on personal computers.
- Inspect materials and all phases of construction of District development projects.
- Interpret and enforce construction plans and specifications.
- Record amounts of materials used and work performed, then process progress payments during the construction period and final payment after the job is finished.
- Identify location of various appurtenances on plans and locate other utility structures ahead of worksites.
- Take samples of materials for examination and coordinate analysis by laboratories.
- Inspect various structures such as sewer mains, lift stations, and other construction; check line, grade, size, elevation and location of structures for conformance with specifications and regulations.
- Inspect adjacent properties for damage from construction activity; investigate resident complaints; confer with property owners regarding project schedule, hazards and inconveniences.
- Schedule service interruptions with minimal interference and inconvenience.
- Respond to public inquiries and requests concerning the District's sewer system.
- Participate in planning, checking, review and processing of plans for private developments affecting sewers and related District facilities, and ensure that they meet all District-imposed

requirements; analyze materials and design data submitted to the District.

- Investigate field problems affecting property owners, contractors, and maintenance operations.
- Prepare special engineering studies and reports.
- Administer and enforce District codes and ordinances.
- Process permits for modifications and connections to the District's sewer system.
- Manage the USA system and mark streets as required.
- Maintain the cleanliness of the workspace and common areas in the Engineering Department.
- Perform other related duties as required.

## **JOB RELATED AND ESSENTIAL QUALIFICATIONS**

### **Knowledge of:**

- Principles and practices of civil engineering as applied to wastewater engineering.
- Principles and practices of estimating procedures, budget preparation, program development, project scheduling and management.
- Applicable City, County, State and Federal laws, codes, ordinances and regulations regarding public construction projects.
- Typical defects and faults in construction.
- Principles, methods, materials, equipment, safe work practices and safety hazards in the construction, maintenance and repair of wastewater infrastructure.
- Soil mechanics and geology; soil sampling and testing methods.
- Land and construction site survey methods.
- Construction definitions and terms used on construction plans and other related documents/materials.
- Basic principles of mechanical systems, electrical power services, and controls as applied to the District's wastewater facilities.

### **Skill to:**

- Operate a motor vehicle safely.
- Operate modern office equipment including computer equipment and generate work product using AutoCAD, MS Word, MS Excel, MS Access, and MS Windows software.
- Make complex engineering computations, and check, design, and prepare engineering plans, studies, profiles, and maps.

### **Ability to:**

- Meet respiratory requirements and use respiratory equipment when necessary in accordance with the District's Standard Procedure.
- Read and interpret construction plans and specifications for both public and private construction plans.
- Deal firmly and tactfully, while maintaining cooperative relationships, with the general public, developers and contractors under difficult circumstances.
- Maintain written technical records.
- Detect and locate faulty materials and workmanship and determine the stage of construction during which defects are most easily found and remedied.
- Test soils, concrete and related materials samples.

- Communicate clearly and concisely, both orally and in writing.
- Understand, explain and enforce the ordinances and specifications of the District.

**Experience and Training Guidelines:**

*Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

**Experience:**

Three years increasingly responsible experience, two of which under the supervision of a registered Professional Engineer or General Engineering Contractor, involving engineering, construction of industrial facilities, construction planning, or construction inspection for a private contractor, municipal agency or engineering consultant involved in significant municipal engineering.

**Training:**

Equivalent to a Bachelors degree from an accredited college or university with major coursework in civil engineering or a closely related field. Twelve (12) years of field experience in construction, engineering, or closely related field may be substituted for the required degree.

**License or Certificate:**

Possession of, or ability to obtain, a valid California driver's license, and a motor vehicle record which meets the District's driving standards.

**Special Requirements:**

*Essential duties require the following physical abilities and work environment:*

The physical demands and work environment described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to stand on paved streets or inclines, sit, walk, squat, reach and twist; use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; and talk or hear. The employee must occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, depth perception, and ability to adjust focus. Additionally, the employee is occasionally exposed to outside weather conditions, entry into confined spaces, electrical hazards, and mechanical hazards, use of ladders or platforms, and walking on uneven terrain, gravel, or mud. The noise level when working in the field is usually loud.

**Effective Date: January 4, 2011**