

CLASS SPECIFICATION
SAN DIEGO CITY CIVIL SERVICE COMMISSION
ASSOCIATE ENGINEER – CORROSION - 1385

DEFINITION:

Under direction, to plan, design, and evaluate a corrosion prevention program for water and wastewater utilities systems; and to perform related work.

*** EXAMPLES OF DUTIES:**

- Plans, designs, and evaluates corrosion prevention systems such as cathodic protection and protective coatings for water and wastewater pipelines, tanks, standpipes, reservoirs, pump stations, and filtration plants;
- Prepares detailed engineering designs for corrosion prevention systems and develops specifications and bid documents;
- Determines location and size of cathodic protection systems, type of conduit for anode leads, and design of rectifier and electrical current systems;
- Conducts soil tests to determine corrosive properties of soil in proposed locations of water and wastewater pipelines;
- Recommends composition of pipe based on soil tests;
- Investigates the effects of the cathodic protection systems on other underground utility systems and, when necessary, recommends the relocation of the systems;
- Evaluates corrosion prevention systems and makes recommendations on improvements;
- Selects, develops specifications, and tests protective coatings;
- Conducts failure analyses of metal structures due to corrosion;
- Reviews new systems designs;
- Prepares technical engineering studies to determine the effect of electrical interference from other agencies' protection systems or other structures creating electrical currents near the City's systems;
- Maintains records and prepares reports regarding the corrosion prevention program;
- Recommends corrosion protective repair methods for facilities in need of repair;
- Manages consultant services for corrosion protection projects.

MINIMUM QUALIFICATIONS:

Please note: the minimum qualifications stated below are a guide for determining the education, training, experience, special skills, and/or license which may be required for employment in the class. These are re-evaluated each time the position is opened for recruitment. Please refer to the most recent Job Description for updated minimum qualifications: <https://www.governmentjobs.com/careers/sandiego/classspecs>.

College graduation with a Bachelor's Degree in Civil, Electrical, Mechanical Engineering, or closely related engineering field; **OR** certification as an Engineer-in-Training issued from a

- * EXAMPLES OF DUTIES performed by employees in this class. The list may not include all required duties, nor are all listed tasks necessarily performed by everyone in this class.**

State licensing board; **OR** registration as a professional Civil, Corrosion, Electrical, or Mechanical Engineer with a State licensing board, **AND** three years of full-time professional corrosion engineering experience which must include preparation of design drawings and development of specifications for cathodic protection systems, development of specifications for protective coatings, and field testing and troubleshooting of cathodic protection systems.