

## **Principal Project Engineer – Mechanical Engineer: IWTP/SWTP**

### **Principal Objective**

Provide technical support to Engineering Department in the development and execution of various projects related to communities and infrastructure projects.

### **Organizational Relationship**

Principal Project Engineer – (ME IWTP/SWTP) will report to a Mechanical Supervising Engineer. Will interact and coordinate work with other Royal Commission Departments

### **Major Activities Performed**

1. Familiarizes with all Royal Commission codes and standards, General Design Criteria and Technical Guidelines, standard drawings and standard guide specifications
2. Review of A/E contractors design submittals, specifications, technical reports, calculations and coordinate work of other disciplines and departments.
3. Preparation of technical specifications and drawings for bid packages related to the development of various community and industrial projects.
4. Will implement methods and solutions for complex engineering problems and will select the most efficient and economical manner to meet our clients' design objectives.
5. Leads other Engineers and design personnel in technical excellence and growth in the Quality Improvement Process.
6. Provides technical consultations for interdisciplinary analytical studies and analyses.
7. Assists in the review of vendor drawings and shop drawings.
8. Prepare conceptual design and layouts.
9. Performs field inspection and provide field support, as necessary during construction phases.
10. Provide response and technical solutions to RFI's raised by Contractors, Operation and Maintenance.
11. Must work well within a dynamic team and serve as a technical consultant to the client.

### **Experience and Qualifications**

1. Bachelor's degree from an accredited university with major course work in mechanical engineering or a related field of study.
2. Minimal 10-12 years of experience in designing systems for Industrial Wastewater (IWTP) and Sanitary wastewater treatment plants (SWTP) or similar industrial facilities.

3. Estimate the power requirements for mechanical equipment based upon the available Master Plan and land use data.
4. Conduct the design of the proposed wastewater plants including all plumbing, fittings, piping networks, pumps, motors, engines, and other mechanical equipment associated with these types of large industrial treatment plant systems.
5. Understanding of electrical power loads and electrical requirements associated with mechanical equipment is required.
6. Conduct design of all mechanical systems needed in an IWTP/SWTP facility project.
7. Develop the hydraulic modeling simulation and design calculations of all pressurized water systems.
8. Coordinate with all relevant stakeholders and government authorities plus developers, consultants and contractors working within the area under study or adjacent areas.
9. Professional Engineer (PE) registration is preferred.
10. Must demonstrate continual progression of experience and expertise in relevant discipline.
11. Ability to communicate effectively both in spoken and written English. Knowledge of Arabic language is a plus.
12. Knowledge of computers and basic software applications such as: AutoCAD, WaterCAD, Creo/Solidworks, and various modeling programs using finite element analysis (FEA), computational fluid dynamics (CFD), and computer aided-manufacturing (CAM), and MS Office (Word, Excel, Power Point).