

CITY OF LATHROP

JUNIOR ENGINEER

*Class specifications are only intended to present a descriptive summary of the range of duties and responsibilities associated with specified positions. Therefore, specifications **may not include all** duties performed by individuals within a classification. In addition, specifications are intended to outline the **minimum** qualifications necessary for entry into the class and do not necessarily convey the qualifications of incumbents within the position.*

DEFINITION:

Under general supervision, learns to perform and performs professional engineering work in the design, evaluation and construction of streets, traffic controls, landscaping, parks, storm drains, sewer, water, and other public works projects; prepares drawings, specifications, and calculations for buildings, structures, streets, sewers, and other public works facilities to ensure compliance with current industry practices, codes, regulations and ordinances; performs other related duties as required.

DISTINGUISHING CHARACTERISTICS:

The **Junior Engineer** is the entry level class in the professional civil engineering series that allows the incumbent to develop journey level knowledge and abilities. Initially, under immediate supervision, incumbents perform a broad range of more routine assignments within an established procedural framework where there are minimal consequences of error, including a wide variety of less complex engineering tasks. This classification is distinguished from the next higher class of Assistant Engineer in that the latter requires an EIT Certificate or the ability to obtain an EIT Certification and performs more complex professional level engineering work.

SUPERVISION RECEIVED/EXERCISED:

Receives immediate supervision from higher level management staff. Incumbents in this class do not routinely exercise supervision.

ESSENTIAL FUNCTIONS: *(include but are not limited to the following)*

- Learns to perform and performs the less complex construction project management and design activities on a variety of Capital Improvement Projects, including streets, lighting, storm drains, sewers, water, parks, and landscape.
- Prepares routine plans and specifications; prepares quantity and cost estimates; assists in the development of design procedures; interprets the application of design criteria; checks plans and specifications for accuracy of design and completeness; coordinates required advertising for bids.
- Assists higher level engineers on large and complex public works construction projects or acts as a project management engineer on small less complex construction projects; assists in coordinating Capital Improvement Projects with contractors, utility companies, other agencies, and the general public.
- Interprets and plots field survey data; reviews laboratory tests of construction materials; performs field inspections; reviews as-built plans to ensure compliance with original plans and specifications.

JUNIOR ENGINEER

Page 2

- Reviews small to medium size subdivision plans or portions of larger plans and site plans for conformance with City ordinances and State law; reviews private contract projects for conformance with City ordinances, policies, standards and accepted engineering practices; meets with architects, engineers and developers to provide preliminary review of development concept and design.
- Assists with administering design and construction contracts; maintains logs and tracks bond expiration dates; prepares reports for the Finance Department as required; collects all required inspection approvals; prepares staff reports for Council; monitors progress on assigned projects to ensure compliance with time and cost schedules for completion; prepares change orders; reviews contractors estimates and prepares and reviews progress payments.
- Interprets codes and regulations in the performance of plan check activities; calculates building valuation; coordinates plan review process with other departments and agencies.
- Assists with administering and enforcing City codes and standards on engineering projects; addresses and responds to the less complex citizen concerns related to engineering problems.
- Establishes positive working relationships with representatives of community organizations, state/local agencies and associations, City management and staff, and the public.

PHYSICAL, MENTAL AND ENVIRONMENTAL WORKING CONDITIONS:

Position requires sitting, standing, walking on level and slippery surfaces, reaching, twisting, turning, kneeling, bending, stooping, squatting, crouching, grasping, crawling, and making repetitive hand movement in the performance of daily duties. The position also requires both near and far vision when inspecting work and operating assigned equipment, and acute hearing is required when providing phone and face-to-face service. The need to lift, carry, pull and push tools, supplies and other equipment weighing up to 25 pounds is also required. Additionally, the incumbent in this position works outdoors in all weather conditions, including wet, hot and cold.

Some of these requirements may be accommodated for otherwise qualified individuals requiring and requesting such accommodations.

QUALIFICATIONS: *(The following are minimal qualifications necessary for entry into the classification.)*

Education and/or Experience:

Any combination of education and experience that has provided the knowledge, skills and abilities necessary for a **Junior Engineer**. A typical way of obtaining the required qualifications is to possess the equivalent to a bachelor's degree in Civil Engineering, or a related field.

License/Certificate:

Possession of, or ability to obtain, a valid Class C California driver's license.

KNOWLEDGE/ABILITIES/SKILLS: *(The following are a representative sample of the KAS's necessary to perform essential duties of the position.)*

Knowledge of:

Principles, procedures, practices, and standards of municipal engineering; principles and practices of construction project management; surveying methods and techniques; strength of materials and stress analysis; CEQA requirements; municipal engineering laws, ordinances, codes, specifications, and plans; applicable federal, state and local laws, codes and regulations, including the Lathrop Municipal Code, ordinances and codes related to building construction; engineering project inspection methods; contract administration; basic principles of mathematics; methods and techniques of scheduling work assignments; standard office procedures, practices and equipment; modern office practices, methods and equipment, including a computer and applicable software; methods and techniques for record keeping and report preparation and writing; proper English, spelling and grammar; occupational hazards and standard safety practices.

Ability to:

Prepare simple, routine and accurate plans, specifications, cost estimates, and engineering reports for review by higher level engineers; inspect a variety of public works construction projects; learn to serve as the project manager on one or more Capital Improvement Projects; make accurate engineering computations; analyze and evaluate design drawings and specifications; prepare and manage project budgets; negotiate with citizens, property owners, contractors and other agencies; maintain detailed project management records and documentation; learn and apply established principles and practices of municipal civil engineering; promote and enforce safe work practices; perform mathematical calculations quickly and accurately; interpret, explain and apply applicable laws, codes and regulations; read, interpret and record data accurately; organize, prioritize and follow-up on work assignments; work independently and as part of a team; make sound decisions within established guidelines; analyze a complex issue, and develop and implement an appropriate response; follow written and oral directions; observe safety principles and work in a safe manner; communicate clearly and concisely, both orally and in writing; establish and maintain effective working relationships.

Skill to:

Operate an office computer and a variety of word processing, design and engineering software applications; safely and effectively operate engineering tools and equipment.