

**ENGINEER I
ENGINEER II
ENGINEER III**

*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.*

JOB OBJECTIVES

Under general supervision (Engineer I and II), or direction (Engineer III), to perform a variety of professional engineering duties supporting the construction of public works projects; to conduct land surveying, various field inspections and plan reviews for compliance with applicable engineering standards; to design and draft complex projects for the development of the City's infrastructure; and to provide assistance and information to contractors, engineering professionals and the general public.

DISTINGUISHING CHARACTERISTICS

Engineer I - This is the entry level class in the professional Engineer series. This class is distinguished from the Engineer II by the performance of the more routine tasks and duties assigned to positions within the series including field inspections and plan reviews. Since this class is typically used as a training class, employees may have only limited or no directly related work experience. Advancement to the II level is based on proficiency in all engineering program areas (design, surveying, construction inspection and project lead responsibilities).

Engineer II - This is the full journey level class within the professional Engineer series. Employees within this class are distinguished from the Engineer I by the performance of the full range of duties as assigned including design, surveying, construction inspection and project lead responsibilities. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit. This class is distinguished from the Engineer III in that the latter assumes responsibility for management of various engineering projects. Advancement to the III level is based on demonstrated proficiency in engineering project management duties on a continuous basis.

Engineer III - This is the advanced journey level class in the professional Engineer series. Positions at this level are distinguished from other classes within the series by the level of responsibility assumed and the complexity of duties assigned. Employees perform the most difficult and responsible types of duties assigned to classes within this series including assuming management responsibility for assigned engineering projects. Employees at this level are required to be fully trained in all procedures related to assigned area of responsibility.

ESSENTIAL FUNCTION STATEMENTS

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

Conduct field inspections of public works construction projects to ensure compliance with applicable engineering standards; measure grade elevations and cross slopes on subgrade and base rock for new

CITY OF CAMAS
Engineer I/II/III (Continued)

roads; witness proof rolls and mark unsuitable areas for removal and repair; witness various engineering tests on new water and sewer lines; inspect subdivisions for final acceptance; prepare various correspondence and produce punch list for developer and contractor; document project activities and progress.

Design and draft complex capital improvement projects using current computer programs and software applications including AutoCad or related software; calculate project cost estimates and quantities of materials needed; calculate and prepare engineer's estimate for the project; compile and prepare project documents, specifications and copies.

Prepare bid documents, contract documents, specifications, cost estimates and engineering drawings for assigned projects; oversee the work of engineering consultants contracted to design public works projects; coordinate meetings and construction activities with contractors, local utility companies, public agencies and various City departments.

Perform land surveying functions; search for existing monuments; lay out control traverse network and brush line of sight; collect topographical features, adjust traverse closure, download traverse data into computer and plot the information; lay out, mark and stake construction improvements for contractors and maintenance crews.

Participate in project coordination and administration functions; conduct pre-construction meetings with contractors, consultants and appropriate City personnel; prepare notice of award, notice to proceed and notice of completion letters to contractors and State agencies; coordinate construction staking schedules and needs with contractors; calculate pay estimates, change orders, plan review and construction inspection fees.

Review pre-application, application and plat submittals, construction drawings, engineering plans, specifications and professional reports for compliance with engineering and construction standards; negotiate, review and draft change orders for Council approval; advise consultants and recommend changes to specifications for compliance as necessary.

Assist with tracking and operation of the City's pavement management system; prepare traffic count assignments for consultants and County technical services; prepare associated charts and graphs.

Inspect construction of domestic water lines, storm water drains and sanitary sewer lines; monitor erosion control measures; conduct chlorine flushing, bacteria tests and pressure tests; conduct proof rolls and grade checks on various stages of road construction.

Conduct inspections of water quality facilities and plans; determine if facilities are built and functioning as originally designed; identify various problems including lack or over abundance of vegetation, restricted inlets or outlets or difficult access to facilities; recommend corrective actions to remedy problems.

Assist with management of the City's Stormwater NPDES Permit, including but not limited to: Compiling data collected from field inspections; initiating meetings with appropriate City departments to establish a regular maintenance program for water quality facilities; present staff recommendations for improvements; coordinate with homeowners associations and private facility owners; tracking illicit discharge; and other permit related activities.

Respond to questions and inquiries from contractors, engineering professionals and the general public; provide lot dimensions, copies of maps and plats and various project information; inspect and issue encroachment permits.

AUXILIARY FUNCTION STATEMENTS

Follow all safety rules and procedures established for work area.

Perform related duties and responsibilities as required.

QUALIFICATIONS

Engineer I

Knowledge of:

Principles and practices of civil engineering.

Methods and techniques of conducting field inspections.

Methods, techniques, tools and equipment used in the construction of capital improvement projects.

Principles of business letter writing and basic report preparation.

Pertinent Federal, State and local laws, codes and regulations.

Ability to:

Perform routine field inspections and plan reviews.

Inspect public works projects for conformance with plans and specifications.

Read, interpret and correct engineering plans, specifications and drawings for compliance with applicable standards.

Perform mathematical calculations quickly and accurately.

Prepare clear and concise reports.

Learn principles and practices of land surveying.

Learn methods and techniques of computer aided drafting.

Learn methods and equipment used in topographical and construction surveys.

Learn operational characteristics of land surveying tools and equipment.

Learn to perform engineering project lead duties.

Learn to design and draft complex projects using current computer programs and software applications.

Learn to interpret and apply applicable Federal, State and local laws, codes and regulations.

Learn to operate a variety of office, drafting and surveying equipment in an effective manner.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

Education and Experience Guidelines

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

Education:

Equivalent to a Bachelors degree from an accredited college or university with major course work in civil engineering or a related field

Experience:

One year of civil engineering experience is desirable.

License or Certificate

Possession of a valid driver's license.

Possession of an EIT certificate is highly desired. EIT certificate and five years of applicable experience may substitute for the education requirement.

Engineer II

In addition to the qualifications for Engineer I:

Knowledge of:

Principles and practices of land surveying.

Methods and techniques of computer aided drafting.

Methods, techniques and equipment used in topographical and construction surveys.

Operational characteristics of land surveying tools and equipment.

Ability to:

Perform engineering project lead duties.

Design and draft complex projects using current computer programs and software applications.

Operate a variety of office, drafting and surveying equipment in an effective manner.

Interpret and apply applicable Federal, State and local laws, codes and regulations.

Respond to requests and inquiries from contractors, engineering professionals and the general public.

Learn principles and practices of project management and administration.

Learn methods and techniques of contract negotiation.

Learn to assume management responsibility for assigned engineering projects.

Learn to participate in project coordination and administration functions.

Learn to prepare bid documents, contract documents, specifications, cost estimates and engineering drawings.

Education and Experience Guidelines

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

Education:

Equivalent to a Bachelors degree from an accredited college or university with major course work in civil engineering or a related field.

Experience:

Three years of increasingly responsible civil engineering experience.

License or Certificate

Possession of a valid driver's license.

Possession of a valid Flagger card or ability to obtain within six months.

Possession of an EIT certificate is highly desirable.

Engineer III

In addition to the qualifications for Engineer II:

Knowledge of:

Principles and practices of project management and administration.

Methods and techniques of contract negotiation.

Advanced mathematical principles as applied to engineering design.

Ability to:

Assume management responsibility for assigned engineering projects.

Participate in project coordination and administration functions.

Prepare bid documents, contract documents, specifications, cost estimates and engineering drawings.

Work independently in the absence of supervision.

Education and Experience Guidelines

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

Education:

Equivalent to a Bachelors degree from an accredited college or university with major course work in civil engineering or a related field.

Experience:

Six years of increasingly responsible civil engineering experience.

License or Certificate

Possession of a valid driver's license.

Possession of a valid Flagging card or ability to obtain within six months.

Possession of a PE certificate is highly desirable.

PHYSICAL DEMANDS AND WORKING CONDITIONS

The physical demands herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform these essential job functions.

Environment: Office and field environment; travel from site to site.

Mobility: Walking, standing or sitting for prolonged periods of time.

Vision: Visual acuity to read and interpret plans, specifications and drawings and conduct field inspections.

Other Factors: Incumbents may be required to work extended hours including evenings and weekends. Incumbents may be required to travel outside City boundaries to attend meetings.