

DEPARTMENT OF HUMAN RESOURCES
COUNTY OF HAWAII

CIVIL ENGINEER I
SR 18; BU 13

Duties Summary:

Performs routine professional engineering work in the design, construction, maintenance, and operation of civil engineering projects; assists in preparing designs, plans, specifications, estimates, and reports; and performs other related duties as required.

Distinguishing Characteristics:

This is the entry-level class in the professional Civil Engineering series. This class differs from that of Civil Engineer II in that it receives specific instructions and follows well-established engineering practices; whereas Civil Engineer II exercises some degree of judgment based on experience.

This class differs from that of the several drafting classes in that it may receive limited assignments in designing. This class differs from that of the land surveying series in that the Civil Engineer I normally is concerned with the design, construction, or inspection of engineering projects and topographical surveying is incidental to the aforementioned duties and responsibilities.

Examples of Duties: *(The following are examples of duties and are not necessarily descriptive of any one position in this class. The omission of specific duty statements does not preclude the assignment of such duties if they are a logical assignment for the position and are consistent with the class concept.)*

- Assists in making preliminary and final surveys.
- Reduces and plots survey notes.
- Computes vertical and horizontal curves and earthwork quantities.
- Prepares mass diagrams.
- Assists in the design of retaining walls, bridges, culverts, pipelines, sewers, sidewalks, highways, and other concrete, steel, and timber structures; develops details, checks computations, and prepares final working drawings, reinforcing steel details, and material schedules.
- Assists in the preparation of specifications and cost estimates.
- Conducts field engineering inspections.

- Checks and interprets plans and specifications.
- Tests construction materials.
- Computes lot closures and areas.
- Conducts land use studies.
- Computes extensions and adjustments to a triangulation system.
- Compiles data and prepares maps.
- Operates a vehicle to perform work-related duties.
- Performs other related duties.

Minimum Qualification Requirements:

Training and Experience:

- A combination of education and experience substantially equivalent to graduation from an accredited college or university with a baccalaureate degree in engineering.

License/Certificate Requirement:

- Possession of a valid State of Hawai'i Driver License (Class 3) or any other valid comparable driver license.

Knowledge of:

- the principles and practices of general civil engineering,
- engineering mathematics,
- engineering mechanics and the mechanics of materials,
- the principles and practices of topographic surveying, and
- structural, mechanical, electrical, hydraulic, and sanitary engineering principles to the extent that these apply general engineering principles common to all recognized fields.

Ability to:

- perform engineering drafting and design work,
- interpret plans, specifications, and land descriptions,
- plot survey notes, and
- prepare maps, plans, profiles, and cross-sections.

Physical Requirements:

Persons seeking appointment to positions in this class must meet the health and physical condition standards deemed necessary and proper to perform the essential functions of the position with or without reasonable accommodations.

Physical Effort Grouping: Light

This is an amendment to the specification for the class CIVIL ENGINEER that was approved on March 24, 1958; and amended and retitled CIVIL ENGINEER I on September 5, 1961; amended on April 2, 2003; and March 23, 2022.

APPROVED: June 26, 2024
Date

/s/ Sommer J. Tokihiro
Director of Human Resources