ORANGE COUNTY CLASS SPECIFICATION

TITLE: JUNIOR ENGINEER  GRADE: 12

TITLE ABBREVIATION: JUNIOR ENGINEER  TITLE NO.: 6420

JURIS.CL: C  SALARY CODE: 71  EEO CODE: PR  FLSA CODE: NE

DEPARTMENT: PUBLIC WORKS  DIVISION: ENGINEERING

SUPERVISOR'S TITLE: SENIOR ENGINEER

DISTINGUISHING FEATURES OF THE CLASS: This is the beginning level of technical engineering work involving responsibility for the independent application of engineering principles in the construction and maintenance of highways and bridges. The incumbent works under the general supervision of a higher level engineer allowing latitude for the exercise of independent judgment on assigned projects. Direct supervision may be exercised over subordinates to whom specific assignments are given and whose work is checked in progress and upon completion. Does related work as required.

TYPICAL WORK ACTIVITIES:
Oversees and inspects construction work on highways, bridges, culverts, and other public works projects ensuring that plans and specification requirements are met;

Performs surveys for engineering design work and establishing property lines and areas, running base lines, in establishing slopes and grades, and in staking for highway, bridge, culvert, or other public works construction or reconstruction project;

Makes various computations related to field surveys and project designs;

Drafts topographical, detail plan, and cross section maps and charts from computer entered data;

Maintains records of field notes and computations;

Assists in designing and drawing plans for structures, facilities, and/or systems utilizing computer software;

Prepares lay outs in connection with design of highways, bridges, and culverts from computer data;

Assists in work in connection with right-of-way;

Prepares prints of plans, drawings, and documents;

Assists in plan reviews in connection with the issuance of permits on County roads;

- Continued -
Prepares quantity and cost estimates for maintenance and construction projects;

Performs general hydraulic design and analysis of highway, bridge, and culvert structures;

Performs general engineering office work including the entry and manipulation of survey data into an engineering-based computer program.

**FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:**

Good knowledge of mathematics, physics, and properties of materials and fluids as applied to civil engineering; good knowledge of hydraulics; good knowledge of engineering construction, survey, and inspection practices, and of the sources of engineering information; skill in the use of drafting and surveying instruments; ability to use mathematical tables; ability to read and interpret engineering drawings and specifications and design routine engineering structures; ability to plan and organize the work of non-technical subordinates; ability to prepare clear and accurate technical reports; ability to get along well with others; ability to follow specific and detailed instructions; mental alertness; accuracy; initiative; physical condition commensurate with the demands of the position.

**MINIMUM QUALIFICATIONS:** Either:

(A) Bachelor's Degree in Engineering, Geology or related field; OR

(B) Associate's Degree in Engineering Science or related field and two (2) years experience in a sub-professional capacity in civil engineering; OR

(C) Possession of Certification Level 2, related to civil engineering technology, from the National Institute for Certification in Engineering Technologies (NICET); OR

(D) Graduation from high school or possession of a high school equivalency diploma and four (4) years of experience in a sub-professional capacity in civil engineering.

**SPECIAL REQUIREMENT:** Must possess and maintain a valid driver's license.

**Note:** Your degree or credits must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education. If your degree or credits were awarded by an educational institution outside the United States and its territories, you must provide independent verification of equivalency. A list of acceptable companies who provide this service can be found on the Internet at [http://www.cs.ny.gov/jobseeker/degrees.cfm](http://www.cs.ny.gov/jobseeker/degrees.cfm). You must pay the required evaluation fee.

**REVISED:** 2/10/2023 AT