

**MENDOCINO COUNTY GOVERNMENT
CLASS SPECIFICATION**

CLASS TITLE:	CIVIL ENGINEER	CLASS CODE: 2025
DEPARTMENT:	TRANSPORTATION	FLSA STATUS: E
REPORTS TO:	VARIOUS	DATE: 02/00 rev. 01/12
CIVIL SERVICE:	YES	BARGAINING UNIT: SEIU

JOB SUMMARY:

This class works under general supervision and performs work of high complexity and responsibility. Incumbents in this class perform a wide variety of technical field and office engineering work in connection with land development projects, construction and maintenance of highways, bridges, flood control, traffic control, water systems and/or solid waste facilities. Civil Engineer requires registration with the State of California as a Professional Engineer (PE).

DISTINGUISHING CHARACTERISTICS:

Working under general supervision, Civil Engineer is a journey level position. Employees at this level are expected to have related background and experience and to be qualified to perform the full scope of duties; using independent judgment in selecting and applying specific references, procedures, sequences and alternatives to different work situations. This position is distinguished from the Senior Civil Engineer by the latter's performance as a lead engineer over other staff and on assigned projects and performance of more complex assignments.

SUPERVISION EXERCISED: No supervision exercised.

EXAMPLES OF DUTIES: *Duties may include but are not limited to the following:*

- Design complex and difficult engineering projects; participates and directs the preparation of calculations, drawings and specifications for a wide variety of engineering projects.
- Serves as the principal engineer and occasionally as chief resident engineer (inspector) for specific maintenance and construction projects; directs and participates in the preparation of engineering calculations and cost estimates relating to quantities of materials used.
- Review civil engineering plans and specifications for accuracy and compliance with all requirements and engineering guidelines.
- Prepare financial reports throughout design and construction phases of County projects to standards required by federal auditors for federal project reimbursement.
- Prepare road and bridge plans and specifications.
- Review and responds to planning applications referred by the Planning and Building Services department.
- Work with designers, contractors, right-of-way agents, consultants, and the general public for completion of projects through all phases of design and construction.
- Issues transportation permits.
- Review Plans, Specifications & Estimates (PS&E) for compliance with federal requirements to include minority business subcontracting, non-collusion provisions, prevailing wage rate requirements, etc.
- Prepare hydrology and hydraulics studies.
- Represent the department at technical meetings and public gatherings.
- Review, evaluates and analyzes the work of engineering consultants for appropriateness, completeness and adherence to the project scope; coordinates revision and corrections.
- Evaluate and analyzes difficult engineering problems and recommends solutions; prepares comprehensive reports and makes recommendations for solutions.
- Analyze structures, highways, and other construction projects to determine the economic, engineering, and environmental feasibility.
- Review subdivision maps for compliance with established requirements; provide engineering advice to building officials; directs the identification and acquisition of easements and right-of-way.
- Provide technical engineering expertise and assistance for other divisions, departments and County agencies.
- Research record, gather information and write traffic studies evaluating the need for traffic controls; prepare associated ordinances and resolutions; and evaluate plans and specifications for traffic related matters.
- Perform review of signing and markings on roads; prepare reports and recommend changes; determine signing needs following new construction of roads.
- Perform and/or direct radar speed surveys and traffic volume counts.
- Review accident reports for safety issues; investigate fatal accidents; plots and files information; and make recommendations.
- Investigate claims against the County resulting from accidents and testifies in court.

- Estimate right-of-way work and estimated costs related to storm damage and other emergencies.
- Perform other related duties as assigned.

MATERIAL AND EQUIPMENT USED:

Surveying Equipment	Computer	Scientific Calculator	Vehicle
General Office Equipment	Camera	Transits/Levels	Theodolite (Data Collector)
Traffic Counters	Digital Odometer	Ball Bank Gauge	Radar Gun
Soils Testing Equipment	Certify in Lab	Auto Desk software	Computer aided design (CAD)

MINIMUM QUALIFICATIONS REQUIRED:

Education and Experience:

Bachelor's degree from an accredited four-year college or university in Civil Engineering, or a related field; and, Three years of progressively responsible related experience; or, when possessing the required license, an equivalent combination of related education, training and experience which provides the required knowledge, skills, and abilities to perform the essential functions of the job.

Licenses and Certifications:

State of California Registered Civil Engineer (PE)
Valid State Driver's License

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Principles, practices and techniques of civil engineering.
- Statistics and advanced mathematics including algebra, analytic geometry, trigonometry, and calculus.
- Land use and planning principles and practice.
- Subdivision laws and legal precedents.
- Land surveying practice and mapping.
- Topographic and construction surveying stress analysis, analytical mechanics and the strength, properties and uses of construction materials.
- Common methods and equipment utilized in engineering construction and of inspection methods utilized in reviewing such work.
- Real property descriptions, survey methods, and right-of-way acquisition requirements.
- Civil engineering design and drafting methods and equipment.
- Recordkeeping, report preparation, filing methods and records management techniques.
- Administration of staff and activities, either directly or through subordinate supervision.
- All computer applications and hardware related to performance of the essential functions of the job.
- Methods and techniques of research, statistical analysis and report presentation.
- Traffic engineering related to road design, striping, etc.
- Computer Aided Design (CAD) software including Auto Desk software in order to perform design calculations.

Skill in:

- Using tact, discretion, initiative and independent judgment within established engineering, environmental, fiscal and departmental guidelines.
- Researching, compiling, and summarizing a variety of informational and statistical data and materials.
- Organizing work, setting priorities, meeting critical deadlines, and following up on assignments with a minimum of direction.
- Applying logical thinking to solve problems or accomplish tasks; to understand, interpret and communicate complicated policies, procedures and protocols.
- Communicating clearly and effectively, both orally and in writing.
- Planning, organizing, assigning, directing, reviewing and evaluating the work of staff.
- Selecting and motivating staff and providing for their training and professional development.

Mental and Physical Abilities:

- Prepare designs and make accurate drawings and maps.
- Establish and maintain effective working relationships with a variety of individuals.
- Write clearly and concisely in order to prepare technical reports, correspondence and maintain records.
- Inspect construction projects and assure compliance with plans and specifications.
- Read, understand and interpret complex technical and legal documents, maps, technical drawings and plans.
- Apply principles of logic and scientific reasoning to develop and evaluate alternative courses of action and determine appropriate solutions.
- While performing the essential functions of this job the employee is frequently required to sit, use hands to finger, handle, or feel, reach with hands and arms, and speak and hear.
- While performing the essential functions of this job the employee is occasionally required to stand, and lift and/or move up to 20 pounds.

Working Conditions:

- Work is performed in a normal office environment with some exposure to outdoor temperatures or dirt and dust.
- While performing the essential functions of this position the employee is occasionally exposed to outdoor weather conditions, work near moving mechanical parts, and work in high precarious places.
- The incumbent's working conditions are typically moderately quiet.

This class specification should not be interpreted as all inclusive. It is intended to identify the essential functions and requirements of this job. Incumbents may be requested to perform job-related responsibilities and tasks other than those stated in this specification. Any essential function or requirement of this class will be evaluated as necessary should an incumbent/applicant be unable to perform the function or requirement due to a disability as defined by the Americans with Disabilities Act (ADA). Reasonable accommodation for the specific disability will be made for the incumbent/applicant when possible.