



## **SR. TRAFFIC ENGINEER**

### **DEFINITION**

Under general direction, plans, coordinates, supervises, and evaluates the work of consultants, professional, and technical staff performing traffic engineering work; performs the statutory duties of Traffic Engineer; provides complex staff assistance to departmental management staff; and performs related duties as assigned.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives general direction from assigned management personnel. Exercises general supervision over consultant, professional, and technical staff.

### **CLASS CHARACTERISTICS**

This is the fully (registered) qualified supervisory-level classification in the professional Traffic Engineer class series. Incumbents are responsible for planning, organizing, supervising, reviewing, and evaluating the work of consultant, professional, and technical staff. Performance of the work requires the use of considerable independence, initiative, and discretion within established guidelines.

This class is distinguished from Sr. Civil Engineer in that the Sr. Traffic Engineer is a specialized classification and requires a registered Professional Civil Engineer and Traffic Engineer license.

### **EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)**

- Performs the most difficult and complex professional traffic engineering work; prepares, reviews, and approves the preparation of plans, specifications, designs, estimates, contracts, schedules, inspections, and project monitoring activities for complex traffic operational issues and problems.
- Supervises and prepares a variety of studies and reports relating to current and long-range County traffic projects, and recommends specific proposals to meet them.
- Plans, organizes, assigns, supervises, and reviews the work of professional and technical engineering staff; trains staff in work procedures; evaluates employee performance, advises employees, and effectively recommends initial disciplinary action; assists in selection and promotion.
- Implements and administers policies and procedures such as guidelines, design standards, and standard plans and specifications while ensuring that operation and maintenance, financial, regulatory, and legal requirements are met.
- Determines and recommends staffing needs for assigned activities and projects; participates in the annual budget preparation and administers assigned budget; prepares detailed cost estimates with appropriate justifications, as required; maintains a variety of records and prepares routine reports of work performance.
- Designs traffic signals and performs traffic modeling.
- Prepares standards, methods, and techniques for solving traffic problems.
- Supervises and participates in the work of collecting, tabulating, and analyzing traffic information.
- Prepares and participates in the preparation of plans and specifications for new and revised traffic signal, channelization, street lighting systems, and operational and geometric improvements.
- Reviews and conditions subdivisions, building plans, and re-zoning requests related to impact upon traffic conditions.
- Provides technical information, instruction, and assistance regarding applicable procedures, methods, and requirements; interprets and explains rules, regulations, and procedures; answers questions and

resolves problems and concerns; enforces County ordinances and policies ensuring adherence and quality control.

- Confers with property owners, school groups, public officials, and civic organizations regarding traffic-engineering problems.
- Coordinates traffic engineering activities with other County departments and divisions, and outside agencies.
- Provides staff support and participates in committees, commissions, and citizen groups relative to transportation and traffic matters.
- Conducts field observation regarding traffic related requests, complaints, and concerns.
- Supervises and participates in traffic and transportation studies conducted by consulting engineers.
- Recommends traffic and transportation needs/improvements based upon studies, surveys, and other information.
- Reviews County codes and ordinances and recommends appropriate additions or deletions concerning traffic engineering problems.
- Assists in the development of consultant requests for proposal for professional and/or construction services and the advertising and bid processes; evaluates proposals and recommends project award; negotiates and administers contracts after award; ensures contractor compliance with County, state, and federal standards and specifications, time, and budget estimates; analyzes and resolves complex problems that may arise; recommends and approves field changes as required.
- Meets and confers with contractors, engineers, developers, architects, a variety of outside agencies, and the general public; relays and acquires information, communicates scope and status, coordinates engineering matters and activities, and resolves problems.
- Serves as a liaison for the assigned function to other County departments, divisions, and other government agencies; negotiates and resolves significant and controversial issues.
- Provides highly complex staff assistance to assigned management staff; develops and reviews staff reports related to engineering activities and services; reviews and implements new regulations; presents information to the Board of Supervisors and various commissions, committees, and community groups; and performs a variety of public relations and outreach work related to traffic activities.
- Directs the preparation and maintenance of a wide variety of records, reports, maps, plans, and other documentation of department activities.
- Performs related duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Principles and practices of employee supervision, including work planning, assignment review and evaluation, discipline, and the training of staff in work procedures.
- Principles and practices of leadership.
- Principles and practices of budget development, administration, and accountability.
- Project management and contract administration principles and techniques.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to engineering and land development projects.
- Advanced principles and practices of civil engineering design and construction.
- Advanced principles and practices of traffic engineering.
- Principles and practices of administration and project management and evaluation.
- Geographic, socioeconomic, transportation, political, and other elements related to traffic engineering and transportation planning.
- Operational characteristics, services, and activities of a comprehensive traffic engineering program.
- Advanced principles and practices of civil and traffic engineering as applied to the planning, design, cost estimating, construction, installation, and inspection of a wide variety of County projects
- Mathematical and computer simulation models.

- Statistical analysis and mathematical concepts related to the planning process.
- Principles and practices of land development.
- Principles and practices of environmental impact assessment and related regulatory processes.
- General principles of risk management related to the functions of the assigned area.
- Recent and ongoing developments, current literature, and sources of information related to the operations of the assigned functional area.
- Recordkeeping principles and procedures.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and County staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination.
- The procedures and methodologies of traffic operations analysis as identified in the latest edition of the Transportation Research Board's Highway Capacity Manual.
- Computers and software programs (e.g., Microsoft software packages, Highway Capacity Software, Syncros/SimTraffic, Citilabs) to conduct, compile, and/or generate documentation and conduct traffic operations analysis.

**Ability to:**

- Plan, organize, assign, review, and evaluate the work of staff; train staff in work procedures.
- Analyze complex technical and administrative problems, evaluate alternative solutions, and recommend or independently implement effective courses of action.
- Maintain a current understanding of traffic engineering problems and solutions.
- Review and analyze designs, specifications, and plans.
- Apply engineering principles and techniques to the solution of highly complex civil engineering problems.
- Apply traffic engineering knowledge to specialized technical problems.
- Prepare clear and concise reports, correspondence, policies, procedures, and other written material.
- Perform complex mathematical and engineering computations with precision.
- Prepare accurate plans, specifications, cost estimates, and comprehensive engineering reports.
- Analyze, interpret, summarize, and present administrative and technical information and data in an effective manner.
- Interpret, apply, explain, and ensure compliance with federal, state, and local policies, procedures, laws, and regulations, technical written material, and County engineering policies and procedures.
- Establish and maintain a variety of filing, recordkeeping, and tracking systems.
- Effectively represent the department and the County in meetings with governmental agencies; community groups; various business, professional, and regulatory organizations; and in meetings with individuals.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Effectively use computer systems, software applications, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

**Licenses and Certifications:**

- Possession of, or ability to obtain and maintain, a valid California or Nevada Driver's License and a satisfactory driving record.
- Possession and maintenance of a Registered Professional Civil Engineer issued by the California Board for Professional Engineers, Land Surveyors, and Geologists (BPELSG).
- Possess and maintain valid certification as a registered Traffic Engineer issued by the California BPELSG.

**Education and Experience:**

*Any combination of the required experience, education, and training that would provide the essential knowledge, skills, and abilities is qualifying.*

Equivalent to a bachelor's degree from an accredited four-year college or university, with major coursework in civil engineering or a closely related engineering field;

AND

Two (2) years of lead project management experience in traffic design and construction work at a level equivalent to the County's class of Traffic Engineer.

**PHYSICAL DEMANDS**

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect development sites, including traversing uneven terrain, climbing stairs, and other temporary or construction access points; to operate a motor vehicle and to visit various County and meeting sites; vision to read printed material and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification with frequent field work such as inspecting development sites. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds. Reasonable accommodations will be made for individuals on a case-by-case basis.

**ENVIRONMENTAL CONDITIONS**

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees also work in the field and are occasionally exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

**WORKING CONDITIONS**

Must be willing to attend meetings outside of normal working hours.