

**COUNTY OF SOLANO**  
**CLASS SPECIFICATION**  
**COMMUNICATIONS TECHNICIAN (SENIOR)**

**CLASS SUMMARY**

Under general and consistent direction, to provide lead supervision and to participate in the assembly, installation, maintenance, and repair of a variety of radio communications equipment; to assign, schedule, and oversee day to day tasks of technicians; to lead and participate in performing preventive maintenance on a variety of communications equipment; and to assist and participate in a variety of operational support and administrative tasks.

**DISTINGUISHING CHARACTERISTICS:**

This classification functions at the advanced journey level of job performance within the Communications Technician job series. Incumbents in this classification provide strong lead supervisory functions and act as a resource to subordinate staff as well as possessing advanced journey level knowledge and skills in either radio/microwave transmitting and receiving or telephony and data communications systems. Incumbents in this job class are expected to have a basic familiarity with all types of communications equipment and systems utilized within the County's operations and supported by the Communications work unit.

This job class is distinguished from the:

- **Communications Supervisor** in that the latter is responsible for the planning, design, and implementation of all County communications systems and has over-all responsibility for all divisional operations.

**SUPERVISION RECEIVED AND EXERCISED:**

- Supervision I provided by a Communications Supervisor or by the next higher level supervisory or management position.
- No supervisor is exercised over others, however, employees in this class may perform lead duties.

**ESSENTIAL DUTIES:** *This class specification represents the core area of responsibilities; specific position assignments will vary depending on the needs of the department.*

- Develops, plans for, assigns, monitors, and participates in the installation, testing, modification and adjusting of VHF/UHF and microwave radio transceivers, antennas, mobile and portable radios and paging receivers, remote control devices, inter-communications, sound systems, and closed circuit television both in the field and in the shop.
- Assigns, monitors, and participates in the installation, testing, modification and adjusting of various types of data communication systems both in the field and in the shop

- Develops, plans for, assigns, monitors, and participates in the adjustment of transmitters and receivers for maximum efficiency; measures frequencies, modulation and power output of radio, microwave and digital circuitry-; operates and monitors radio telephone equipment
- Receives, prioritizes, and schedules responses to service/repair calls or maintenance alarms; performs the more complex troubleshooting, investigations, analyses and diagnostics of operations and performance of assigned electronic, radio/microwave transmission devices, and/ or telecommunications systems/equipment and initiates appropriate action to resolve problem and optimize system/equipment effectiveness
- Analyzes monitors and evaluates the on-going operations and activities of assigned system responsibilities; recommends improvements and modifications as needed; prepares various reports and records on operations and activities periodically and upon request.
- Confers with users on systems changes, specific needs, user complaints/concerns; contacts and consults with various County staff members and vendors to schedule equipment and servicing; estimates equipment and repair costs.
- Responds to user inquiries and/or trouble reports; assists users to determine malfunctions; initiates troubleshooting of software and equipment problems and failures, documenting and referring complex equipment problems to telecommunications vendors.
- Monitors and maintains central inventory of parts and supplies to ensure adequate levels of stock are on hand; orders necessary parts and supplies as necessary and consistent with County's purchasing policies and procedures.
- Conducts research for new and enhanced telecommunications equipment; contacts vendors for price, features, upgrades, warranties, and delivery; assists with surplusage of unneeded radio and electronics equipment.
- Develops, oversees, and participates in training Communications Technicians in a variety of radio/microwave or telephony/telecommunications functions and tasks; participates in and supports cross-training activities within Communications work unit.
- Acts as resource to Communications Technicians regarding technical and/or procedural questions; answers questions and provides information to users and other County departments regarding specialty area(s) of expertise; troubleshoots and investigates concerns/complaints; recommends and/or implements appropriate corrective action as necessary.
- Builds and maintains positive working relationships with co-workers, other County employees, contractors, vendors, and the general public utilizing principles of good customer service.
- Performs other duties of a similar nature or level as assigned.

## **EDUCATION AND EXPERIENCE:**

**Education:** Successful completion of the twelfth grade, or equivalent, supplemented with at least thirty (30) semester credits in electronics, electrical engineering, communications technology or a related telecommunications or technology field.

**Note:** One (1) year of additional experience may be substituted for the educational requirement.

**Experience:** Considerable and progressively responsible work experience in a variety of functions that would demonstrate possession of and competency in requisite knowledge and abilities for either radio/microwave transmission/receiving or telephony/data communications systems.

Typical qualifying experience would be:

- At least two (2) years of journey level work experience equivalent to the work performed by the Communications Technician II with the County of Solano.

## **LICENSES, CERTIFICATES, AND REGISTRATIONS:**

- Possession of, or ability to obtain, a valid and appropriate California driver's license.
- Possession of a valid FCC General Radio Operator License or equivalent may be required.
- Tower Climbing Safety & Rescue Training Certificate may be required.

## **REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:**

### **Knowledge of:**

- Advanced and accepted electrical and electronics theory and practices.
- Standard telecommunications equipment and software.
- Standard work safety principles and practices.
- Advanced and accepted RF, radio, and microwave communications theory and practices
- Advanced radio propagation theory and practice.
- Advanced radio-over-internet ROIP theory and practice.
- Advanced computer hardware, software, and networking theory and practice.
- Advanced radio codeplug configuration and programming.
- Advanced mathematics theory and practice related to electronics, radio and RF.
- Standard and accepted radio frequency modulation and direction
- Standard tools and test equipment utilized in the repair and servicing of radio communications equipment.
- Advanced and accepted radio communications transceiving equipment for infrastructure,

mobile and portable subscriber units, and dispatch consoles.

- Basic principles and practices of supervision and public administration.
- Operations and administrative procedures of the County's organization and the assigned work Unit.

**Skills and/or Ability to:**

- Install, troubleshoot, maintain and replace telecommunications and radio communications equipment.
- Troubleshoot and maintain a variety of communications devices and equipment.
- Test and diagnose problems with communications equipment.
- Analyze needs, prepare and conduct radio communications training for end users.
- Understand, carry out, and interpret both written and oral instructions in an independent manner.
- Understand, interpret and apply laws, regulations, and policies governing designated communications/telecommunications operations.
- Comply with laws, regulations, and professional practices governing designated communications/telecommunications operations.
- On a continuous basis, know and understand installation and maintenance activities and observe safety rules. Intermittently, analyze problem equipment; identify safety hazards; interpret work orders; remember how to locate and operate equipment; and explain jobs to other employees.
- Intermittently, sit at a desk or while driving; stand and walk, while performing installation and maintenance activities; bend and twist to adjust equipment; kneel and squat to perform and review work; climb up onto heavy equipment, ladders, and/or towers to inspect and perform installation, maintenance, or repair operations; perform simple and power grasping, pushing, pulling and fine manipulation; and lift heavy weight.
- Collect and analyze data to identify and evaluate problem; research and analyze alternative solutions; draw logical conclusions; recommend and implement most appropriate corrective action to be taken.
- Collect and analyze data and electronic test information and circuitry to repair communications equipment.
- Utilize and read precision test instruments accurately and effectively.
- Accurately read and apply a variety of electrical and electronic schematic and wiring diagrams and services manuals.

- Collect and analyze data and test information to identify operating problems/situations and take appropriate and effective corrective actions.
- Communicate effectively and tactfully in both oral and written forms, maintaining confidentiality at all times.
- Utilize a variety of hand and power tools and equipment in a safe and effective manner.
- Perform a variety of mathematical calculations accurately.
- Maintain accurate records, prepare and present reports.
- Conduct and integrate assigned functions and activities in a cohesive and effective service delivery system; secure cooperation and teamwork among Communications staff members and other departments/contractors.
- Schedule, coordinate, and prioritize the work of self and others for successful job performance.
- Meet the physical requirements necessary to perform required duties in a safe and effective manner for self and others.
- Establish and maintain effective work relationships with those contacted in the performance of assigned duties.

#### **PHYSICAL REQUIREMENTS:**

- **Mobility and Dexterity:** Positions in this class typically require the following: (1) balancing, stooping, kneeling, reaching, crawling, reaching, fingering, grasping, and repetitive motion; (2) climbing and working safely on ladders (extension and A-frame) and step ladders with a total weight that does not exceed the weight capacity of the ladder or the highest rated capacity of the harnesses and lanyards used for fall protection; and (3) standing or walking approximately seven hours per day on uneven surfaces.
- **Lifting, Carrying, Pushing and Pulling – Medium work:** Positions in this class require exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 of force constantly to move objects. **OR Heavy work:** Positions in this class require exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force frequently, and /or up to 20 pounds of force constantly to move objects. **OR Very Heavy Work:** Employees in this class will be exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pound of force frequently, and/or in excess of 20 pounds of force constantly to move objects.
- **Vision:** Positions in this class require the employee to have close visual acuity, with or without correction, to prepare and analyze data and figures, view a computer terminal, read, and to distinguish between normal and off shade colors and to read gauges and meters in

dimly lighted areas etc. Positions in this class also require employees to have depth perception and good eye-to-hand coordination in order to operate a motor vehicle and to operate a variety of hand and power tools.

- **Hearing/Talking:** Positions in this class require the employee to perceive the nature of sounds at normal speaking levels with or without correction, and have the ability to receive detailed information through oral communication. Positions in this class require the employee to express or exchange ideas by means of the spoken word. Detailed or important instructions must occasionally be conveyed to others accurately, loudly, and/or quickly.
- **Other:** Positions in this class typically require the employee to have sufficient sense of smell, vision, touch and hearing to observe equipment functions for normal and abnormal occurrences.

#### **WORKING CONDITIONS:**

- **Office Work plus Outdoor Work:** While most work will be in an office setting, visits to outdoor worksites will require an employee in this class to occasionally work outside and be subject to a variety of weather conditions, walking on uneven terrain, and working around vehicles in operation and around machinery with moving parts. **AND/OR**
- **Work in an Industrial Area:** Employees in this class will often be working in an industrial area and thus will be subject to exposure to moving mechanical parts, electrical currents, toxic agents, fuel, oil, gases, smoke, fumes, odors, dust, and vibrations; employees may be subject to injuries when working with hand and power tools and equipment. **AND/OR**
- **Traffic Hazards:** Employees in this class will **OR** may be required to operate a vehicle and thus will be subject to traffic hazards while driving. **AND/OR**
- **Working Alone:** Employees in this class may be working in remote areas and/or may be working on night shifts and/or on weekends, and thus may working alone for extended periods of time. **AND/OR**
- **Working at Heights:** Employees in this class may be required to work at heights six feet and more above the ground on equipment and structures.

#### **OTHER REQUIREMENTS:**

- **Background Checks:** The County may conduct a background check and a reference check on candidates prior to appointment to a position within this class. *[and, depending on the position, may include information such as:]* The background check may include the State of California Department of Justice, the Federal Bureau of Investigation (FBI), the Child Abuse Central Index (CACI), and criminal checks in any City/County where the applicant has lived, worked or gone to school.
- **Independent Travel:** Incumbents are **OR** may be required to travel independently, for example, to perform work at other work sites, to attend meetings with other County employees, to attend meetings with community organizations, etc.

- Hours of Work: Incumbents may be required to work weekends, holidays, irregular hours, on-call, and after normal business hours.
- Drug Testing: Candidates for positions in this class and employees in this class will be subject to Pre-Employment, Reasonable Suspicion, Post Accident, Return-To-Duty and Follow-Up drug testing in accordance with the Solano County Alcohol and Drug Free Workplace Policy.

**CLASS HISTORY AND CLASS INFORMATION:**

- Date Approved by the Civil Service Commission: December 2017
- Date Adopted by the Board of Supervisors: December 2017
- Date(s) Revised: August 2017, September 2024