

COUNTY OF Solano County
CLASS SPECIFICATION
COMMUNICATIONS TECHNICIAN I/II

CLASS SUMMARY:

To assemble, install, maintain, and repair a variety of communications, telephony, and/or telecommunications equipment including, depending on assigned specialty(s), radio, microwave, data telemetry transmission and receiving equipment, Voice Over IP (VOIP) systems, telephony systems, voice mail systems, data terminals, switching and control systems, and/or audio/video equipment; to perform preventive maintenance on a variety of communications equipment; and to assist other Communications Technician crews in the completion of special projects and the more routine tasks.

DISTINGUISHING CHARACTERISTICS:

Communications Technician I: This is the entry-level classification in the Communications Technician job series. Incumbents in this job class must possess some knowledge/training in either radio/microwave transmitting and receiving or telephony and data communications systems. Incumbents in this job class learn to assemble, install, maintain, and repair assigned specialty equipment. Incumbents in this job class may work independently on the less complex tasks such as running cable or other "set up" tasks. Employees in this job class may have only limited or no directly related work experience and must work under immediate supervision while learning assigned job tasks.

This class is distinguished from the:

Communications Technician II classification by the performance of the more routine tasks and duties assigned to positions within this series

SUPERVISION RECEIVED AND EXERCISED:

- Supervision is provided the Communications Supervisor
- No supervision is exercised over others.

Communications Technician II: This is the journey level classification in the Communications Technician job series. Incumbents in this class are assigned the full range of duties. Employees in this job class receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies within the work unit. Incumbents in this job class must possess 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 assigned work unit.

SUPERVISION RECEIVED AND EXERCISED:

- Supervision is provided the Communications Supervisor
- No supervision 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.*

- Duties may include, but are not limited to, the following:
- Installs, tests, modifies, and adjusts VHF/UHF and microwave radio transceivers, antennas, portable radios and paging receivers, remote control devices, inter-communications, sound systems, and closed circuit television both in the field and in the shop.
- Installs, maintains, modifies, and repairs various types of telephony/data communications voice/data transmission, signaling and digital and analog switching equipment, cabling and fiber optics both in the field and in the shop.
- Adjusts transmitters and receivers for maximum efficiency; measures frequencies, modulation and power output of radio, microwave and digital circuitry; operates and monitors radio telephone equipment.
- Moves, adds, changes, deletes, and configures user profiles and system parameters for assigned telecommunication systems.
- Designs and programs call routing paths for automatic call distribution in high call traffic departments.
- Repairs, installs and modifies existing communications equipment as assigned; contacts vendors as needed with technical questions; completes work compliance with vendor specifications and standards.
- Responds to service/repair calls or maintenance alarms; troubleshoots, investigates, analyzes and diagnoses the operation 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.
- 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.
- Constructs and assembles custom design communications equipment; fabricates special brackets and hardware for equipment installation; installs and maintains antenna systems on towers; "lays" and "pulls" cable for telephone and data communications systems.
- Monitors the installation and/or servicing of assigned communications systems/equipment by contractors/vendors; provides coordination between County's customer department and the vendor/service provider for activation/restoration of affected system/equipment.
- Advises telephone system users of telephone features, procedures, functions, and services;

assists in providing on the job training for other staff members and/or overseeing the work of others on assigned work crews.

- Participates on a variety of special projects and/or combined work crews; learns basics of installing and maintaining a variety of communications systems/equipment, and with training, beyond assigned specialty area of expertise.
- Conducts research for new and enhanced telecommunications equipment; contacts vendors for price, features, upgrades, warranties, and delivery.
- Completes reports on work performed.
- 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:

Communications Technician I:

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 experience in a variety of functions that would demonstrate possession of the requisite knowledge, skills, and abilities may be substituted for the educational requirement.

Communications Technician II:

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 experience in a variety of functions that would demonstrate possession of the requisite knowledge, skills, and abilities may be substituted for the educational requirement.

Experience: At least two (2) years of progressively responsible work experience including radio/microwave transmission/receiving or telephone/data communication systems, equivalent to the work performed by the Communications Technician I with the County of Solano.

LICENSING, CERTIFICATION AND REGISTRATION REQUIREMENTS:

- Applicants may be required to possess a valid California Driver's License, Class C.

- Applicants will be required to possess, or ability to obtain, a valid FCC General Radio Operator's License or equivalent.

Note: All licenses, certificates and registrations must be kept current while employed in this class.

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Communications Technician I:

Knowledge of:

- Basic electronics theory and practices.
- Basic telecommunications equipment and software.
- Standard work safety principles and practices.

When assigned to radio/microwave functions:

- Basic radio communications theory and practices.
- Basic microwave theory.
- Basic radio frequency modulation and direction.
- Standard tools and test equipment utilized in the repair and servicing of radio communications equipment.
- Basic radio communications transceiving equipment.

When assigned to telephony/data communications functions:

- Basic principles and practices of installing, maintaining, and repairing digital, VOIP, and analog telecommunications equipment and systems.
- Basic operational characteristics of integrated telephone, data and telecommunications systems.
- Standard tools and test equipment utilized in the repair and servicing of telephony and data communications equipment.
- Basic telephony/data communications equipment and systems.

Skills and/or Ability to:

- Learn the operations and administrative procedures of the County's organization and the assigned work unit.
- 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
- Understand and carry out both written and oral instructions.
- Intermittently, sit at a desk or while driving; stand and walk while performing installation and maintenance activities; bend, kneel, squat and twist to adjust equipment; climb ladders or towers; or climb up on to heavy equipment to inspect and conduct installation, maintenance and repair operations; perform simple and power grasping, pushing, pulling and fine manipulation; and lift heavy weight.
- Accurately differentiate various colors of wires and diagrams.
- 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 routine arithmetical calculations accurately.
- Maintain accurate records and document activities.
- Recognize and respect appropriate limits of authority and responsibility.
- 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.

Communications Technician II:

(in addition to the qualifications for a Communications Technician I)

Knowledge of:

- Standard electronics theory and practices.
- Standard telecommunications equipment and software.
- Standard work safety principles and practices.

When assigned to radio/microwave functions:

- Standard and accepted radio communications theory and practices.
- Standard and accepted microwave theory.
- Standard and accepted radio frequency modulation and direction.
- Standard tools and test equipment utilized in the repair and servicing of radio communications equipment.
- Standard and accepted radio communications transceiving equipment.

When assigned to telephony/data communications functions:

- Standard and accepted principles and practices of installing, maintaining, and repairing digital and analog telecommunications equipment and systems.
- Standard operational characteristics of integrated telephone, data and telecommunications systems.
- Standard tools and test equipment utilized in the repair and servicing of telephony and data communications equipment.
- Standard and accepted telephony/data communications equipment and systems.
- Operations and administrative procedures of the County's organization and the assigned work unit.

Skills and/or Ability to:

- Understand and carry out 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.
- Collect and analyze data and electronic test information and circuitry to repair communications equipment.
- Utilize and read precision test instruments accurately and effectively.

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