

**COMMUNICATIONS ENGINEERING ASSOCIATE (7607)
TASK LIST - 2021**

Designs new information technology (IT) systems, communications systems, IT infrastructure, IT facilities, and/or modifications to existing systems and equipment, such as cable TV, access control, paging, local area network, wireless network, distributed antenna systems, fiber and copper cabling, microwave, CCTV, VHF/UHF, radio systems, and remote and mobile dispatch centers, in order to meet specific communications and information technology needs.

Makes long-term IT systems, communications systems, IT infrastructure, and IT facilities plans for the City's needs and growth for up to 5 years

1. Attends meetings with personnel from organizations involved in planning the City's IT systems, communications systems, IT infrastructure, and IT facilities, such as contractors, City officials, City staff, FCC, and other governmental representatives, in order to discuss and/or to define the City's present and future IT systems, and follows up on items presented in these meetings.
2. With guidance from a supervisor, performs analyses related to communications and IT systems, infrastructure, and facilities design, such as feasibility and reliability, maintainability, and long term cost evaluations using engineering and mathematical principles, in order to design new communications and IT infrastructure and facilities systems.
3. With guidance from a supervisor, performs studies related to communications and IT systems, communications systems, IT infrastructure, and IT facilities engineering, such as propagation, intermodulation, and radio interference, in order to evaluate the design of various communications license radio systems for the City's needs.
4. Explains communications media and technology to non-technical personnel, such as the end user, in order to provide information needed for their assessment of various communications systems, including automated fire dispatching, mobile digital communication systems, and simulcast radio, sufficient to facilitate technical discussions and or decision making.
5. Participates in planning meetings with City department representatives and other government agencies to share information on technology systems and ideas.
6. Studies contractor materials such as proposals, part specifications, studies, and concepts to evaluate their feasibility, cost effectiveness, and long-term impact on present City-owned systems and/or facilities in order to formulate a recommendation on their implementation to the supervisor.
7. Writes technical reports, that may be included as part of a project report, regarding communications systems and/or processes, such as sources of equipment and forecasts on

the reliability of various types of equipment, in order to inform management.

Evaluates and requests communications and IT systems and equipment/services purchases by the City

8. Reads equipment specification sheets and technical manuals to compare performance characteristics of test and communications and IT equipment, such as voice and data networks and interface equipment and cable, in order to recommend the equipment that meets the City's established needs.
9. Writes detailed specifications for the purchase or lease of communications and IT equipment such as test equipment and voice and data networks.
10. Writes a statement of work, including specifications, for communications and IT equipment and/or services to be included in the procurement process and to provide vendors with a specific description of the equipment and/or services on which they may bid or RFP (Request for Proposal) or RFI (Request for Information).
11. Meets with vendors regarding communications and IT products in order to evaluate whether the product meets the City's needs, taking into consideration ease of installation, backward compatibility, functionalities, scalability, and maintenance.
12. Compares vendors' bids on communications and IT equipment to comply with specifications, price, and suitability in order to make a recommendation on the bids and/or proposals.

Coordinates requests from City customers for communications and IT-related installations, repairs, and maintenance

13. Reads communications and IT service and/or installation request, performs detailed evaluations of the request, and formulates recommended courses of action in order to comply with the request within appropriate procedures and/or policies.
14. Writes statement of work, service request, and/or work orders for the implementation and/or installation of various types of communications and IT equipment and systems, such as internet protocol (I.P.) phone, data, radio, dispatch, network, and wireless network, in order to provide a detailed written record of work to be done, equipment and materials to be used, and projected labor costs.
15. Schedules communications and IT installations at City facilities and on public and private property in the City by calling public and private agencies in order to ensure the installations are completed properly, observe Rights of Way, and to arrange for City installers to become familiar with the new installations and equipment.

Oversees the training of communications engineering personnel IT technical staff

16. Works with City staff to apply engineering principles in a variety of communications

engineering assignments such as preparing engineering designs, drawings, reports, planning, and installations.

17. Reviews and inspects communications and IT engineering personnel's work such as designs, drawings, and installations in order to ensure accuracy and completion of the work and to suggest needed revisions.

Performs various activities to facilitate the proper use and evaluation of procedures for the City's communications and IT systems

18. Writes test procedures to be used by technical communications and IT personnel for testing operating conditions of communications systems and equipment in order to provide a systematic method for determining system performance and/or maintenance needs.
19. Monitors and evaluates communications and IT systems to ensure systems are functioning properly in order to take necessary actions.
20. Prepares written administration and operating procedures of IT systems/equipment such as radio systems or network systems in order to facilitate training of City staff on IT systems and equipment.

Ensures that communications and IT systems/infrastructure/facilities records are maintained completely and accurately

21. Oversees system management for checking, reviewing, and controlling the maintenance of records of City communications systems information such as cable terminations, radio licenses and fiber records, IT infrastructure, IT systems, and IT facilities to ensure their accuracy and completeness.
22. Attends meetings and reads reports on radio system requirements and/or FCC rules, such as location coordinates, site provisions, and operating parameters by using topographic maps and adjacent co-channel user data software analytics, in order to provide complete and accurate information on radio license applications for radio regulatory agencies.
23. Coordinate maintenance and repair of communications and IT systems in order to ensure they are functioning properly.