

Code: 2391

Title: ELECTRICAL ENGINEER

SUMMARY: Supervises and participates, within the limits imposed by registration or certification, in professional level electrical and communications engineering work to ensure buildings, facilities and related systems (including transportation) are designed, constructed, installed, renovated, operated and maintained according to engineering practices and local, State and Federal guidelines, specifications or regulations.

DUTIES/RESPONSIBILITIES: (Work assignments may vary depending on the department's needs and will be communicated to the applicant or incumbent by the supervisor.)

Interprets and applies the Pima County building, electrical and related codes by effecting processes, such as examining or preparing architectural and engineering design and development plans and inspecting construction activities or buildings;

Manages, plans and designs low, medium and high voltage electrical and electronic installations and systems for transportation related systems/facilities, e.g., traffic signals, street lights, traffic counting stations and airport lighting, communication and navigational devices per guidelines, codes and technical standards;

Administers and coordinates inspection functions and the activities of staff or contractors to ensure compliance with codes, fire regulations and related ordinances, regulations, requirements, plans and specifications;

Reviews plans and projects to build or improve buildings, facilities and communications systems to insure all required systems and equipment are included and that they meet applicable code requirements or professional standards and practices;

Plans, develops and designs projects and provides plans and specifications for project construction, modification or implementation;

Monitors systems, programs and project progress to ensure specifications conform to building codes, fire regulations, zoning laws, design requirements and State, local and Federal regulations and guidelines;

Determines quantity, type and cost of materials, equipment and supplies and total hours needed to complete projects and participate in the procurement and bidding process;

Reviews and develops recommendations concerning enforcement disputes, owner/contractor conflicts and complaint investigations;

Consults with, advises and coordinates technical building and communications system use associated activities, such as: maintenance, installing security or fire alarm systems, determining equipment location, providing diagnostic recommendations about mechanical, electrical or communications systems, or making final determinations as to substitutions in project plans and specifications;

Prepares and maintains records, files and reports and submits technical reports to governing or licensing agencies;

Acts as project engineer for new facility or systems construction and modification programs, communications systems preventive maintenance and fixed, mobile or portable communications systems installations;

Makes final inspections of completed projects to authorize their acceptance by the County;

Supervises staff by assigning and evaluating their work, training and implementing specific programs and procedures.

KNOWLEDGE & SKILLS:

Knowledge of:

- principles, theory, practices and procedures of electrical or communications engineering;
- techniques of design, construction, material and equipment applications, systems integration and maintenance;
- building codes, fire regulations, zoning and other technical and related requirements applicable to area of specialization, such as building construction and improvement, technical communications

- requirements, traffic signals, airport communications and navigational devices/systems;
- procedural, technical and legal documentation and processes relating to communications systems;
- administrative practices and procedures;
- computer systems and programs used to improve the quality of designs or efficiency of planning and operations, program management, communications and administration.

Skill in:

- applying engineering principles, practices and procedures to solve technical problems;
- reading and interpreting construction plans, drawings and electronic, electrical and communications system specifications;
- coordinating activities with the general public, craftsmen, architects, engineers, contractors and consultants;
- applying supervisory principles;
- communicating effectively.

MINIMUM QUALIFICATIONS:

Registration in any state as a professional Electrical Engineer.

OTHER REQUIREMENTS:

Licenses and Certificates: All positions require certification as a Registered Professional Electrical Engineer in the State of Arizona, per Arizona Revised Statute (ARS) 32-121, at the time of appointment, or within a specified period after initial appointment. Some positions require a valid Arizona Class D driver license at the time of application. Failure to obtain/maintain the required registration/licensure shall be grounds for termination.

Special Notice: (Incumbents Only) Pending professional Arizona State technical registration as an Electrical Engineer, incumbents must not use the title Electrical Engineer. The interim title of Electrical Engineering Professional is to be used during this period.

Physical/Sensory Requirements: Physical and sensory abilities will be determined by the position.

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.

Pima County

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