



**BOARD OF SUPERVISORS AGENDA ITEM REPORT**

Requested Board Meeting Date: March 21, 2017

**Title:** Classification and Compensation Matters - New Classification

**Introduction/Background:**

The new 2704/Industrial Electrician job classification was requested by the Regional Wastewater Reclamation Department and Facilities Management Department for use by positions performing journey-level industrial electrical work within an industrial work environment. Industrial electricians are generally involved in maintenance, repair and trouble shooting of electrical systems and equipment with higher voltages than other/commercial electricians.

**Discussion:**

Currently positions required to perform journey-level electrical work in an industrial setting are allocated to the more general, 0912/Trades Maintenance Specialist job classification. That classification is also used for several different journey-level trades specialties. This sometimes leads to confusion for job applicants resulting in difficulties trying to fill vacant positions. Additionally, we have identified that industrial electricians generally command higher compensation than other journey level electricians. This serves to further complicate our recruiting efforts for this specialty area. The proposed new classification more accurately reflects the roles and responsibilities and provides a compensation level competitive with the surveyed market.

**Conclusion:**

This new classification more accurately defines the duties and responsibilities of positions required to perform work as industrial electricians. This new job classification will aid in eliminating confusion of potential job applicants as well as attract more qualified applicants to our industrial electrician positions.

**Recommendation:**

It is recommended that Class Code 2704, Industrial Electrician, Salary Grade 46, Salary Range \$42,868 - \$63,482, EEO Code 07 (skilled craft workers), FLSA Code Non-exempt (paid overtime) be approved for use as submitted.

**Fiscal Impact:**

Estimated costs for reallocating current positions/employees into the new classification: \$4,026 for remaining FY16/17 and \$26,170 for FY17/18. These costs are borne by the user departments from within their current and future budgets. Costs for new hires are borne by the hiring departments from within current/future budgets.

**Board of Supervisor District:**

1       2       3       4       5       All

Department: Human Resources Telephone: 520-724-2732

Department Director Signature/Date: *[Signature]* 3/1/17

Deputy County Administrator Signature/Date: *[Signature]* 3-6-17

County Administrator Signature/Date: *[Signature]* 3/6/17



*Code:* 2704

*Title:* INDUSTRIAL ELECTRICIAN

**SUMMARY:** Performs journey-level industrial electrical maintenance, repair, diagnosis, troubleshooting, construction, fabrication, and preventive maintenance in an industrial environment. This classification is distinguished from the Trades Maintenance Specialist and Trades Maintenance Specialist-Senior classifications by its focus on industrial electrical work being performed in an industrial work environment.

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

Performs and/or assists in the installation, maintenance, or repair of industrial electrical systems rated at 480 volts or higher in County facilities;

Maintains, troubleshoots, repairs, and installs 480vac motors, submersible pumps, complex motor controls, and pump controls in an industrial setting;

Maintains power, lighting, control systems, and process alarm wiring systems in overhead cable trays, underground duct banks, vaults, and manholes;

Maintains electrical equipment in OSHA classified spaces (explosive hazardous rated locations);

Troubleshoots industrial control systems, AC/DC variable speed motors, variable frequency drives (VFD), and soft starters;

Recommends electrical system requirements for facilities and conducts technical inspections on new installations of electrical systems, modifications of existing equipment, motors, and related electrically operated apparatus;

Determines routing, location, and method of installing industrial wiring, conduit, equipment, fixtures, and accessories from complex industrial drawings, wiring diagrams, blueprints, specifications, and sketches;

Operates and maintains medium voltage (15kV) substations including protective relays and controls;

Tests, calibrates, and programs breaker trip settings and functions;

Performs scheduled inspections and reviews of electrical panels, performs proper preventative maintenance on all associated electrical equipment, and upgrades electrical equipment;

Identifies and documents all electrical enclosures and electrical equipment within facilities and maintains accurate labeling in all panels, motor control centers (MCCs), junction boxes, and switch gear;

Follows proper safety protocols on electrical equipment;

Prepares work schedules and coordinates maintenance schedules with integrated teams;

Prepares technical reports of electrical operational issues;

Performs calculations involved in the operation of sizing electrical circuits, transformers, uninterruptable power supplies (UPS) units, panels, breakers, starters, box and conduit fill and wire sizes;

May oversee and consult with outside electrical and construction contractors to assure compliance with National Electrical Codes and Regulations (NEC) and Pima County specifications, rules, policies, and regulations;

Responds to electrical emergencies.

**KNOWLEDGE & SKILLS:**

Knowledge of:

- National Electrical Codes and Regulations (NEC) including NFPA 70E;

- Arc Flash requirements including categories, labeling and personal protective equipment (PPE);
- advanced tools, equipment, and testing devices of the electrical trade including the proper use and required maintenance;
- occupational hazards and safety precautions of the industrial electrical trade, including those associated with AC and DC circuits;
- required electrical maintenance and repair of electrical industrial equipment and motor control systems;
- advanced troubleshooting methods and repairs and diagnostics of multiple and various electrical/electronic systems;
- testing, calibration, and programming breaker trip settings and functions;
- computer systems and basic programs used to perform mathematical calculations revolving around requirements based in the National Electrical Codes and Regulations (NEC);
- automatic transfer switch (ATS) operations as well as main-to-main switchgear;
- electrical wiring, cable terminations, and splicing techniques;
- reading, understanding and working from P&IDs, ladder logic, one-line prints, equipment cut sheets and manufacturer-provided drawings;
- Confined Space Entry procedures and Lockout/Tagout procedures.

**Skill in:**

- performing journey-level tasks of an electrician in an industrial environment;
- understanding and following oral and written instructions;
- establishing and maintaining effective working relationships with others;
- interpreting and applying required codes and standards to work situations;
- maintaining written documentation of activities;
- communicating effectively;
- setting-up and operating machine tools such as drill press, conduit bender, grinder, and other hand tools necessary to complete a repair or installation;
- the operations of forklifts and/or other mobile equipment (e.g. scissor lift and articulated boom).

**MINIMUM QUALIFICATIONS:**

**EITHER:**

(1) Completion of an industry-recognized electrical apprenticeship program and three years of journey-level industrial experience as an electrician maintaining industrial electrical systems and distribution lines of at least 480V.

**OR**

(2) Five years of journey-level industrial experience as an electrician maintaining industrial electrical systems and distribution lines of at least 480V.

**OTHER REQUIREMENTS:**

**Licenses and Certificates:** Some positions require a valid Arizona Class D driver license at the time of application. Failure to obtain/maintain the required licensure shall be grounds for termination.

**Special Notice Items:** Due to the need for access to law enforcement, detention or correctional facilities, some positions may require satisfactory completion of a personal background investigation by law enforcement agencies. Some positions may carry the risk of exposure to infectious diseases, blood-borne pathogens, asbestos, or wastewater and sewage products,



therefore special medical screening prior to or during employment may be necessary to assure employee health and safety.

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

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

Pima County

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