

**COMPETENCY MODEL FOR
ASSISTANT STREET LIGHTING ELECTRICIAN
CLASS CODE 3809**

The following competencies have been identified as those that best separate superior from satisfactory job performance in the class of **ASSISTANT STREET LIGHTING ELECTRICIAN**. (Numbers refers to the order of competencies in the Competency Bank.)

1. Reading Comprehension
2. Mathematics
3. Judgment and Decision Making
6. Attention to Detail
8. Safety Focus
20. Job Knowledge
26. Electrical Understanding
35. Teamwork

On the following pages are descriptions of each competency, including a definition, the level of the competency required for the class (*italicized*, **bolded**, and underlined), examples of behavioral indicators, and satisfactory and superior performance levels.

1. READING COMPREHENSION – Comprehends and correctly applies information presented in written form. Makes correct inferences; draws accurate conclusions.

Level of Competency Required by Job:

Level 1: Concrete, specific job-related information (work orders; instructions; material/equipment labels).

Level 2: General information related to field of work and assignments; (articles in trade publications; technical/instructional manuals; memos; letters; e-mails; reports).

Level 3: Abstract/complex information (highly technical articles/ reports in specialized area; legal or other regulatory material).

Examples of Behavioral Indicators:

- Follows written instructions correctly.
- Learns information presented in writing.
- Identifies relevant written information.
- Interprets written legal regulatory material accurately.

Performance Levels:

Satisfactory

Reads instructions correctly. Learns from manual and other printed material.

Superior

Learns from manual and may answer others' questions. Explains information presented in written form to others.

2. MATHEMATICS – Performs arithmetic or higher-level mathematical computations accurately.

Level of Competency Required by Job:

Level 1: Perform arithmetic computations (add, subtract, multiply, divide, ratios, percentages).

Level 2: Use algebra (substitute numbers for letters in a formula), geometry (angles, distances, area), and/or descriptive statistics (mean/median/mode, standard deviation, range).

Level 3: Apply and interpret calculus, inferential statistics (t-tests, correlations, ANOVA, multiple regression) or other very high level mathematics.

Examples of Behavioral Indicators:

- Quickly and accurately performs arithmetic computations.
- Appropriately selects and applies formulas for stated purpose.
- Correctly identifies an appropriate analysis for a specific purpose and selects the appropriate computer program for computation.
- Accurately interprets and presents results of mathematical/statistical computations.

Performance Levels:

Satisfactory

Knows mathematical requirements of the job and performs them correctly. Verifies work to ensure accuracy.

Superior

Identifies additional opportunities for the application of mathematics in work. Answers questions/trains others to assist them in their use of mathematics.

3. JUDGMENT AND DECISION MAKING – Accurately assesses situations, seeks new information if necessary, and applies all available information to reach sound conclusions/formulate effective response.

Level of Competency Required by Job:

Level 1: Training and guidelines needed to respond to immediate situations within very specific function are provided (or supervisor available to assist).

Level 2: General information and guidance to assist in responding to a variety of situations across a range of circumstances are provided.

Level 3: Little guidance available for responding to a wide range of complex situations with far-reaching and/or enduring consequences.

Examples of Behavioral Indicators:

- Effectively responds to atypical situations.
- Asks questions or otherwise obtains additional relevant information to make a decision.
- Formulates a decision and necessary actions based on available facts.
- Correctly infers appropriate response based on information provided and existing policies, personal experience, and/or consultation with others.
- Discusses conclusions/possible responses with others before taking action as necessary.
- Considers impact of decisions on all affected parties.

Performance Levels:

Satisfactory

Correctly assesses routine and unusual situations and reaches appropriate conclusions for actions needed. Obtains additional information and/or consults with others as necessary.

Superior

Evaluates new situations accurately to establish an appropriate response or plan of action. Recognizes the impact on all affected parties, as well as the possible ramifications and/or repercussions of setting a precedent.

6. ATTENTION TO DETAIL – Extremely careful in addressing all aspects of each work assignment in order to produce “completed staff work” and/or avoid any negative outcomes.

Level of Competency Required by Job:

Level 1: Ensure all aspects of work assignment are completed as directed.

Level 2: Verify that each aspect of work assignment is properly completed; make logical inference regarding additional activities that may need to be performed to produce “completed staff work.”

Level 3: Include evaluation of final work/work product in its accomplishment; make adjustments as possible to improve.

Examples of Behavioral Indicators:

- Carefully checks all aspects of work for completion and accuracy before submitting.
- Identifies errors (for example, typo’s, computations, measurements, application of laws/rules/policies) and corrects them prior to submitting.
- Cross-checks work against available resources.
- Sets up a means of checks and balances to ensure work accuracy.
- Considers changes in final work product to ensure usability by recipient.
- Completes all revisions upon request.

Performance Levels:

Satisfactory

Ensures that each task accomplished represents “completed staff work.” No remaining details/ inconsistencies for others to address.

Superior

All aspects of each task completed are verified to be correct. Identifies any foreseeable consequences of work that may need to be addressed and does so.

8. SAFETY FOCUS – Performs work in a way that minimizes risk of injury to self or others.

Level of Competency Required by Job:

Level 1: Maintain awareness of unsafe conditions and actions to avoid injury.

Level 2: Follow safety rules/procedures; avoid known hazards in the work environment.

Level 3: Carefully follow safety rules and procedures and consistently use all necessary safety equipment.

Examples of Behavioral Indicators:

- Wears seat belt.
- Ensures safe physical work environment by taking actions such as eliminating unstable stacks of materials, closing drawers so filing cabinets will not tip over, and keeping pathways clear of tripping hazards.
- Reviews safety procedures before beginning each job with known hazards.
- Follows safety procedures while performing work even when it takes more time.
- Uses safety equipment such as goggles, gloves, and earplugs as required or warranted.
- Frequently checks safety equipment for proper condition and operation.

Performance Levels:

Satisfactory

Maintains awareness of personal safety to avoid injury or property damage during all work activities.

Superior

“Safety first.” Places avoidance of injury or property damage above all other job requirements. Mentions the need to follow safe work practices to co-workers. Actively seeks ways to avoid injury.

Safety Focus Areas

1. Knowledge of traffic control and safety standards for pedestrian and vehicular traffic as required by the Work Area Traffic Control Handbook (WATCH), including the use of control, warning, and guidance devices, cones, warning flags, warning signs, and barricades, sufficient to effectively expedite traffic flow and ensure pedestrian, vehicular, and work crew safety.
2. Knowledge of safety procedures required to establish boom clearance for energized overhead lines, including those outlined in Sections 1760, 2946, and 2948 of the California Construction Safety Orders, as well as the “ten-foot six-foot” standard sufficient to ensure a safe working area free of electrical hazards.
3. Knowledge of basic first aid procedures used to treat on-the-job injuries, such as those outlined in the American Red Cross First Aid/CPR/AED Participant’s Manual sufficient to effectively assist in treating minor injuries such as cuts, electrical shocks, abrasions, and punctures.
4. Knowledge of safety procedures, practices, and regulations as required by the California Vehicle Code and California Division of Occupational Safety and Health Administration (Cal-OSHA) while operating heavy-duty trucks and other City vehicles, including those related to the use of safety equipment, proper weights and loads, driver’s license class restrictions, and pre-trip vehicle inspection procedures sufficient to ensure the safety of oneself and others while operating such equipment.
5. Knowledge of safety principles, practices, and procedures as required by the Department of Public Works: Bureau of Street Lighting and the California Division of Occupational Safety and Health Administration (Cal-OSHA) when assisting a crew engaged in the construction and repair of electroliner street lighting systems, such as those related to the proper use of personal protective equipment (PPE), including hardhats, gloves, safety glasses, safety vests, steel-toed boots, ear protection, respiratory protection, protective clothing, and other devices, sufficient to ensure the safety of oneself and others while working at a job site.

20. JOB KNOWLEDGE – Knows information required to perform a specific job. Includes both widely available courses of study (for example, chemistry, human resources management, graphic arts) and City-specific information (parking regulation and ticketing practices; purchasing procedures; provisions of the City Charter).

Level of Competency Required by Job:

Level 1: Knowledge is concrete, factual, and/or procedural and may be defined by the organization. Situations in which it is applied are quite consistent.

Level 2: Knowledge is substantive and may be defined by an external trade, field, or profession. Situations in which it is applied vary and, as such, require breadth and depth of understanding.

Level 3: Knowledge is abstract, conceptual, and/or complex and may be supported by a well-defined academic discipline or authoritative sources (e.g., laws, ordinances, government guidelines/regulations/codes). Situations in which it is applied may vary greatly or be novel.

Examples of Behavioral Indicators:

- Performs work correctly/avoids technical (job content related) errors.
- Answers technical questions about work accurately.
- Asks few technical questions about the performance of routine work activities.
- Offers advice (“coaching”) to new employees regarding their work.
- Develops training programs for other employees.
- Sought out as a source of information by others.

Performance Levels:

Satisfactory

Sufficient job knowledge to perform work correctly independently. Answers technical questions about work correctly.

Superior

Expertise in technical job information sufficient to serve as a resource to others. May develop training manuals/ programs and/or give internal and/or external presentations related to work.

Job Knowledge Areas

1. Knowledge of various types of street lighting posts, including their components and location of balance points, such as concrete, cast iron, and steel posts, grounding potheads, high voltage disconnects, receptacles, and street lighting transformers sufficient to properly assemble or disassemble post parts, attach the slings used to lift or set posts, and assist an electrician in proper circuit installation.
2. Knowledge of methods used to read and interpret various electrolier standard plans and circuit patrol maps, such as those used to identify parts lists, types of luminaries, types of foundations required, mounting heights, overall dimensions, voltage, separation of street lighting circuits, and service points, sufficient to properly assemble or disassemble electroliers in accordance with applicable plans and assist in repairing street lighting circuits in a timely manner.
3. Knowledge of specifications and standards related to the construction and repair of electrolier street lighting systems as required by the Standard Specifications for Public Works Construction manual (Greenbook), including those pertaining to: various types of wire and cable used in street lighting electrical circuitry, such as high and low voltage cable, various wire gauges, and types of insulation; conduit installation, such as proper depth of conduit placement, sizes and types of conduit, and related connectors; procedures and materials used in pull box installation, such as grades of rock, setting heights, and electrical bonding of conduit; and proper cable and wire splicing techniques, such as high and low voltage splices, various connector types, and wraps and insulation techniques, sufficient to identify the type of wire cable, ensure proper electrical connections, and safely assist in wire cable, conduit, and pull box installations in accordance with construction specifications.
4. Knowledge of proper rigging procedures and techniques, including selecting the appropriate knot and hitch for a given load, such as square knots, half hitches, and slip knots, sufficient to properly set or lift street lighting posts.
5. Knowledge of various hand, power, pneumatic, and crimping tools and equipment used in the construction and repair of electrolier street lighting systems, including wrenches, screw drivers, socket sets, hammers, taps, hand chisels, measuring tapes, saws, pavement breakers, digging spades, jacking drills, tamps, air compressors, pipe threaders, pipe reamers, and Burndy, Nicopress, and Klein crimping tools, sufficient to use them in a safe and proper manner when assisting an electrician performing such work.
6. Knowledge of the proper placement, maintenance and operation of derrick equipment, including the use of hand and foot controls to direct the movement and speed of the boom, as well as inspecting the equipment for leaks, kinked or frayed cable, and/or bent, broken, or worn hooks sufficient to ensure the safe and proper operation and maintenance of such equipment.

26. ELECTRICAL UNDERSTANDING – Comprehends the concept and the operation of flow of electrical current.

Level of Competency Required by Job:

- Level 1: Know the properties of electricity relevant to the work environment and work to be performed in order to correctly perform work and recognize hazards that will be created by the failure to do so.
- Level 2: Sufficient understanding of electricity to recognize problems and determine repair needed to prevent disaster/restore operation.**
- Level 3: In-depth understanding of electrical principles and phenomena sufficient to design and/or oversee the installation of complex electrical systems.

Examples of Behavioral Indicators:

- Ensures safe physical work environment by taking actions such as eliminating exposed electrical wire, faulty connections, empty sockets, and overloaded circuits.
- Recognizes the danger of fire from faulty electrical installations.
- Uses tools, equipment, and instruments properly to accomplish electrical work correctly and safely.
- Systems designed and/or for which installation is overseen perform as intended upon completion.

Performance Levels:

Satisfactory

Understands the operation of electricity sufficient to readily learn and perform electrical work.

Superior

Displays exceptional insight into the operation of electrical systems, and makes correct inferences regarding them. Promptly and accurately troubleshoots problem.

Electrical Understanding Areas

1. Knowledge of electrical principles related to street lighting, including current flow and electrical conductivity, sufficient to prevent personal injury and ensure a safe work environment when working on multiple circuits.
2. Knowledge of types and uses of fuses, including cartridges, plugs, stats, and circuit breakers, sufficient to correctly isolate control of an electrical source from a work area.
3. Knowledge of procedures used to properly attach testing equipment to an electrical circuit, including continuity testers, ohm volt meters, multifunction meters, and other electrical testing equipment, sufficient to locate a ground on the circuit, test the circuit for proper voltage, and ensure the fuses have continuity.

35. TEAMWORK – Interacts effectively with others to achieve mutual objectives; readily offers assistance to others to facilitate their goal accomplishment.

Level of Competency Required by Job:

Level 1: Work effectively as a member of a work unit or project team. Readily offer assistance to others when they have too much work or have too little.

Level 2: Work effectively as a team member in which different people have different roles/responsibilities and perspectives. Identify points for collaboration with co-workers; readily offer and request assistance.

Level 3: Work effectively as a part of an interdependent team (your work gets done only if the work of the whole team is done; evaluation of team performance is more relevant than individual performance).

Examples of Behavioral Indicators:

- Discusses work-related matters with co-workers.
- Offers and requests assistance readily.
- Offers and is receptive to suggestions.
- Identifies problems with workflow that will prevent team from accomplishing its goals.
- Provides constructive criticism and feedback to team members to improve overall functioning of team.
- Assigns credit to team for accomplishments.

Performance Levels:

Satisfactory

Cooperates with co-workers and fulfills responsibilities as a member of a project team. Maintains a focus on common objectives and offers and requests assistance readily.

Superior

Sees the team as a whole; acknowledges that performance of the team is what in reality is evaluated by others. If anyone fails, everyone on the team fails.