



## SYSTEMS MAINTAINER, SIGNALING and COMMUNICATIONS, eBART

JC: 000152  
PG: 400  
FLSA: Non-Exempt

BU: S01 (SEIU)  
Created: February 2016

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

### **DEFINITION**

Under general supervision this class is responsible for ensuring safe, timely, inspection, maintenance and repair of train control, signal, communications and electrical systems and facilities within the dedicated eBART railroad right of way, stations and maintenance facility limits. Additionally, complies with applicable rules and regulations.

### **CLASS CHARACTERISTICS**

This journey level classification is responsible for the inspection, testing and diagnostic analysis of wayside signal systems, rail safety communication systems, and car borne components. Additionally, this class performs maintenance on railway signal and communications equipment such as, Closed Circuit Television (CCTV) track signals, train control equipment, power supplies and associated communications equipment.

### **REPORTS TO**

This classification reports to Assistant Superintendent Systems, eBART and/or his/her designee.

### **EXAMPLES OF DUTIES** – *Duties may include, but are not limited to, the following:*

1. Inspects, maintains, tests and repairs all train control signals, and communications and electrical systems according to all original equipment manufacturer requirements, industry standards, California Public Utilities Commission (CPUC) and Federal Railroad Administration (FRA) regulations and eBART policy and procedure.
2. Performs inspection, maintenance, testing and repair of all electrical systems, equipment and components located in, maintenance shop, stations, signal houses, and other eBART facilities.
3. Installs, maintains, repairs, and modifies a wide variety of industrial systems and equipment such as, controls, transformers, motors, motor starters and controllers, generators, lighting and back-up emergency lighting systems, fire alarm systems, and battery powered equipment.
4. Performs inspection, maintenance, testing and repair of all computerized, electronic, and electro-mechanical train control/signal equipment in the eBART yard, mainline, and control facilities; diagnoses, repairs, removes and replaces power supplies, relays, switches and related electrical components.

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5. Adjusts, removes and replaces circuit boards, sensors, and related electronic components; adjusts, repairs, removes and replaces mechanical devices and parts such as gears, springs, clutches and rods in eBART facilities.
6. Performs inspection, maintenance, testing and repair of all analog and digital, data and voice, network communication devices and infrastructure including, telephones, Closed Circuit Television (CCTV), radio, public address, dynamic signs, and computer network systems.
7. Performs inspection, maintenance, testing and repair of communication system infrastructure such as wiring plants, fiber optic cables, networking switches and routers, and wireless systems; adjusts voltage, frequency, tuning, and sensitivity of components for proper operation. Uses diagnostic test equipment and precision measuring devices in the course of the work.
8. Responsible for maintenance and repairs of station appurtenances; responds to service calls to diagnose and correct emergencies involving the track/signal/communications/electrical systems; determines whether equipment can be repaired in the field and whether or not "work-arounds" are possible to maintain system service.
9. May assist vehicle maintenance staff with troubleshooting or repair of revenue vehicle systems.
10. May assist Track and Civil maintenance staff with troubleshooting or repair of track and mechanical systems.
11. Responsible for generating work history documentation including incident reports, maintenance and inspection records, and daily logs.
12. Responsible for functioning as an "Employee-In-Charge" (EIC) in providing protection for other eBART personnel or contractors working on eBART property.
13. Must develop and maintain positive working relationships with co-workers, supervisors, contractors and customers, and effectively handle conflict situations.
14. Performs other duties as assigned.

*This classification will be engaged in original and other duties as assigned without regard to the limitations of job descriptions in order to maximize the efficient delivery of eBART services.*

### **QUALIFICATIONS**

#### **Knowledge of:**

Knowledge of electrical systems, principles of analog and digital electronics, electronic control circuit and associated mechanical, pneumatic, hydraulic system testing and inspection.

Knowledge of troubleshooting; power distribution systems facilities power distribution systems, equipment, electronics and relay control logic.

Occupational hazards and standard safety practice.

Federal, State and local laws, codes and regulations.

#### **Skill in:**

Reading and interpreting diagrams, engineering drawings, manuals, schematics and work orders for signal, communications, train control and electrical and electronic control.

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Must demonstrate the ability to assess situations and exhibit sound judgment to make decisions within the authority of the classification.

Performing the duties of the job safely, efficiently and in compliance with all applicable rules and regulations without direct supervision, including the ability to operate required vehicles and equipment.

Demonstrates the ability to maintain alertness, awareness and vigilance.

Communicating clearly and concisely, both orally and in writing.

Establishing and maintaining effective working relationships with those contacted in the course of work.

### **Other Requirements:**

Must retain a valid class "C" California Driver's License.

Must know and follow all general railway safety rules and procedures in the performance of duties, in, on and around an active railroad environment including stations, shops, layover tracks, bus bays and parking lots including CPUC-GO175, Title 49 CFR 213.7.

Ability to obtain a valid class "A" California Commercial Driver's License and drive heavy construction vehicles as necessary.

Must respond appropriately to co-workers, passengers, maintain accurate logs and records of work performed.

Must meet vision and color recognition requirements for signal recognition and repair.

Must be willing to work off-hour shifts, holidays and weekends beyond your regular scheduled hours.

Must be able to lift or position a fifty (50) pound object.

### **MINIMUM QUALIFICATIONS**

#### **Education:**

Associate Degree or certification in Electrical Engineering, Electrical systems repair or a closely related field from an accredited college or vocational school.

#### **Experience:**

Two (2) years of experience as a fully qualified Journeyman or Master Electrician or Journeyman Lineman with proof of licensure; or four (4) years of experience as a fully qualified journeyman or master electrician, or a journeyman lineman, performing maintenance of electrical systems.

#### **Substitution:**

Two (2) years of experience as a fully qualified Journeyman or Master Electrician, or Railroad Signal and Communications Systems Maintainer preferred. Or four (4) years of experience as a fully qualified Journeyman or Master Electrician or Journeyman Lineman, performing maintenance of electrical systems in a related field.

### **PREFERRED QUALIFICATIONS**

Experience in repairing and troubleshooting Automatic Train Protection (ATP) and wayside signal systems, electric lock mechanisms, Automatic Train Stop (ATS) inductors, coded track circuits, event recorders, testing relays, interlocking plants, Automatic Block Signaling (ABS) and Centralized Traffic Control (CTC) signal systems. Three (3) years railroad signal and communications crew experience.

### **WORKING CONDITIONS**

#### **Environmental Conditions:**

Railroad, stations, maintenance facility environments.

Computers, office machines, shops and shop machinery.

Exposure to physical, electrical, chemical hazards, inclement weather conditions.

**Physical Conditions:**

Must be able to work in cramped overhead, confined, enclosed or awkward spaces including maintenance pits, equipment rooms and roof hatches.

Must be able to stoop, bend, crouch, crawl, balance and climb.

Must be able to walk long distances over uneven terrain.

**BART EEO-1 Job Group:** 1550 – Engineering Technicians

**Safety Sensitive:** Yes