

Position: **Benchmark Job #230**

Ministry: Transportation and Highways

Working Title: **Electrician**

Branch: Electrical Branch

Level: Range 18

Location: Coquitlam

NOC Code: 7241

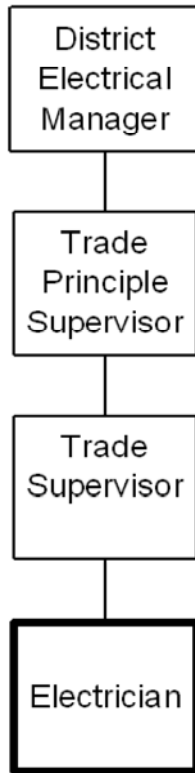
PRIMARY FUNCTION

To service, maintain and repair electrical installations and equipment including primary distribution systems, high and low voltage systems, street lighting, traffic signals, street lights, swing bridges, traffic control systems and other related facilities.

JOB DUTIES AND TASKS

1. Services, maintains and repairs electrical installations and equipment
 - a. programs traffic control mainframes using a computer and sends data to Victoria to be checked
 - b. tests the operation of traffic control mainframes
 - c. checks and maintains all components of traffic controllers including conflict monitors, detectors, relays, load switches, fans, heaters, and related equipment
 - d. cleans equipment and parts by steam cleaning, sand blasting, and using solvents and chemical cleaners
 - e. tests and diagnoses problems and carries out repairs of malfunctioning components and parts using various tools, equipment and machinery; electrical blue prints
 - f. makes required wiring changes for the intersection in traffic controller cabinets
 - g. changes mainframe units and conflict monitors as required
 - h. removes and installs traffic controller cabinets
 - i. responds to trouble calls relating to traffic signals, street lighting systems and swing bridges and prepares reports on work completed
 - j. checks, maintains and installs traffic signal lights, street lights, traffic signal poles and street light poles
 - k. tests, repairs and installs detection loops
 - l. digs out, installs and repairs in-ground junction boxes and installs electrical conduit
 - m. installs and repairs traffic island markers
 - n. repairs arrow boards on vehicles
 - o. calibrates, reassembles and replaces components and parts according to manufacturers' specifications and ministry standards
2. Performs other related duties
 - a. operates repair truck including conducting pre-trip inspections and air-brake checks
 - b. compiles lists of parts required for maintenance and repair and submits for ordering
 - c. documents work performed on traffic controllers and makes copies of timing sheets and intersection sheets

- d. maintains shop equipment and facilities
- e. operates, service vehicles, cranes, augers and forklifts
- f. monitors performance of contracts to \$100,000 and makes Local Minor Purchase Orders up to \$500 limit
- g. works from heights in lift bucket, at night in emergency situations, or in heavy traffic situations



FACTOR	REASON FOR CLASSIFICATION	DEGREE	POINTS
1	<p>JOB KNOWLEDGE</p> <p>Understand the principles of electronics to analyze and diagnose electrical problems to service electrical installations and equipment such as primary distribution systems, high and low voltage systems, street systems, traffic systems and other related facilities.</p>	G	250
2	<p>MENTAL DEMANDS</p> <p>Judgement to apply analysis and interpretation of electrical problems and choose an approach using a combination of accepted electrical techniques and equipment to service electrical and electronic equipment and determine if electrical equipment is operating to prescribed standards.</p>	E	150
3	<p>INTERPERSONAL COMMUNICATION SKILLS</p> <p>Tact required to advise others on procedures for repairs of traffic control equipment.</p>	B	20

4	<p>PHYSICAL COORDINATION AND DEXTERITY</p> <p>Significant coordination and dexterity required to calibrate and adjust electronic equipment to precise tolerances.</p>	D	22.5
5	<p>RESPONSIBILITY FOR WORK ASSIGNMENTS</p> <p>Guided by electrical standards, applies accepted work methods in a different way to diagnose problems in electrical and electronic equipment and to determine the appropriate repair or replacement options.</p>	E	120
6	<p>RESPONSIBILITY FOR FINANCIAL RESOURCES</p> <p>Moderate financial responsibility to authorize purchases using Local Minor Purchase Orders of up to \$500 per transaction.</p>	D	22.5

FACTOR	REASON FOR CLASSIFICATION	DEGREE	POINTS
7	<p>RESPONSIBILITY FOR PHYSICAL ASSETS/INFORMATION</p> <p>Considerable responsibility to perform full maintenance and repair to electrical and electronic equipment.</p>	E	33
8	<p>RESPONSIBILITY FOR HUMAN RESOURCES</p> <p>Responsibility to provide formal instruction to flag persons on safety procedures.</p>	B	9
9	<p>RESPONSIBILITY FOR WELL BEING/SAFETY OF OTHERS</p> <p>Moderate care and attention to oversee flag people to ensure the safe flow of traffic in and around an intersection and to ensure traffic control devices are operating correctly.</p>	C	15
10	<p>SENSORY EFFORT/MULTIPLE DEMANDS</p> <p>Focused sensory concentration to frequently visually focus on electrical equipment repairs.</p>	C	12
11	<p>PHYSICAL EFFORT</p> <p>Heavy physical effort to frequently pull moderate weight cables through conduits.</p>	E	24
12	<p>SURROUNDINGS</p> <p>Exposure to the elements almost always while repairing electrical installations in all weather conditions with no available shelter where the work must be completed without interruption.</p>	E	12
13	<p>HAZARDS</p> <p>High level of exposure to hazards from frequently working around high voltage equipment.</p>	E	12

Total Points: 702

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