



Disability Services
Safety and Claims Management
Department of Executive Services
Human Resources Management Division
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JOB ANALYSIS

Job Title:	Rail Facilities Mechanic	DOT Title:	Maintenance Repairer, Industrial
SVP:	8	DOT #:	899.261-014
Location of Analysis:	Light Rail, 3407 Airport Way, Seattle, WA 98104	Name of Employee:	
Analyst:	Kyle Pletz, VRC, CDMS	JA Source:	Diana Wurn
Presenting VRC:	Kyle Pletz, VRC, CDMS	Employer Contact:	Ian Bennett
Date Analysis Completed:	4/8/16	Supervisor Contact Information	Phone: 206-903-7492 E-mail: ian.bennett2@soundtransit.org

☒ On-Site ☐ Interview ☐ Representative

JOB DUTIES:

Essential Functions according to the employer:

All King County jobs require ability/essential function to:

- Demonstrate predictable, reliable, and timely attendance.
 - Follow written and verbal directions to complete assigned tasks on schedule.
 - Read, write, and communicate in English & understand basic math.
 - Learn from directions, observations, and mistakes and apply procedures using good judgment.
- Work independently or as part of a team and interact appropriately with others.

The responsibilities of this classification include troubleshooting, maintaining, repairing, upgrading, and performing comprehensive preventive maintenance on systems associated with Light Rail operations and public facilities. Rail Facilities Mechanics assist with the installation, maintenance and repair of systems and equipment throughout light rail's systems and facilities.

- Maintain all public and operating facilities, equipment and associated components under the management of Light Rail, including maintaining and repairing a variety of plumbing, HVAC, tool, vehicle wash, tunnel and associated systems.
- Perform a variety of preventive maintenance functions and service checks on facilities, buildings and equipment.
- Install, modify, repair, test plumbing and piping systems; repair and replace broken pipes, fixtures, faucets, sinks, toilets, fountains, valves, etc.
- Repair and install framing, siding, roofing; apply sheetrock, insulation and doors.
- Repair, modify, and perform preventive maintenance; test and certify wet and dry fire sprinkler systems and associated mechanical devices.
- Respond to emergency alarms and trouble calls related to fire sprinkler systems; identify, repair and/or replace malfunctioning components.
- Perform annual testing and certification of mechanical devices in fire and life-safety systems.
- Install, maintain, repair and modify equipment and system assemblies; install, attach or brace appurtenances to buildings, walls, ceilings and floors.
- Design, layout and fabricate various metal components, parts or fixtures used in the repair,



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maintenance and modification of facilities, buildings and equipment; perform shop and field welding, layout, cutting and fitting; operate a variety of welding and burning equipment.

- Install, maintain, repair and modify environmental drainage systems and components.
- Plan, schedule and coordinate activities and work with other trades, divisions and outside agencies and contractors.
- Perform lock and security system maintenance, repair and modifications.
- Service and repair special artwork.
- Perform painting and carpentry work.
- Perform testing of backflow devices.
- Service and repair HVAC systems; service and repair shop tools and equipment.
- Set-up work-zone traffic control areas; flag track-way to provide safe rail work zones.
- Maintain work records and complete work requests.
- Load and unload tools, materials and equipment.
- Maintain appropriate parts stock on assigned vehicles.
- Work with blueprints and other drawings.
- Perform snow and ice removal.
- Operate company assigned vehicles, including Aerial Lift equipment.
- May inspect any work completed by contractors.
- Assist other trades as necessary. Perform other duties as assigned.

EXPERIENCE, QUALIFICATIONS, KNOWLEDGE, SKILLS:

MINIMUM QUALIFICATIONS:

- Knowledge and understanding of advanced mechanical theory and current practices.
- Knowledge of related national, state and local codes and means of compliance.
- Knowledge of standard construction practices and principles of building systems, industrial controls and safety procedures.
- Skill in heavy equipment operation, basic carpentry, concrete finishing, and using welding equipment.
- Skill in safely and efficiently utilizing appropriate tools and equipment.
- Skill in reading and interpreting blueprints and drawings.
- Skill in oral and written communications.
- Skills in dealing proactively and sensitively with customers.
- Skill in training coworkers on system equipment.
- Skill in problem solving and analytical ability to solve common problems.
- Skill in installing and maintaining mechanical equipment.

NECESSARY SPECIAL QUALIFICATIONS:

- Washington Class B CDL driver's license or the ability to obtain and maintain a Class B license within 6 months of hire date and an acceptable driving record.
- Endorsements for Backflow Tester Certification and Seattle Fire Department Sprinkler System certification are required.
- Forklift, Aerial Lift, Confined Space, First-Aid/CPR and other certifications or requirements determined to be necessary to meet the business needs of the employing unit may be required.
- Work from high places on mechanical lift devices, support structures and poles; indoors and outdoors and in inclement weather.

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Machines, Tools, Special Equipment, Personal Protective Equipment Used:

Truck, van, hand tools, power tools, hi-lift, scissor lift, boom truck, ladder, parts washer, industrial pressure washer, industrial high temperature pressure washer, snow plow, hydraulic trailer, dump trailer, air handler, snow blower, sweeper, welding equipment (oxyacetylene), bench grinder, sand blaster, plumbing equipment (such as power snake), backfill preventers, radio, phone, mill, lathe, cranes, band saw, shear, eye protection, ear protection, face protector, steel toe boots, confined space equipment, air handlers, HVAC equipment, silo, vaults, pumps, hydraulic equipment, etc.

PHYSICAL REQUIREMENTS

Frequency Scale	Strength	Work Pattern
N = Never	<input type="checkbox"/> Sedentary	<input checked="" type="checkbox"/> Full-time
S = Seldom (1-10 %, up to 48 min)	<input type="checkbox"/> Light	<input type="checkbox"/> Part-time
O = Occasional (11-33%, 48 min. – 2 hr 25 min)	<input type="checkbox"/> Medium	<input type="checkbox"/> Seasonal
F = Frequent (34-66%, 2 hr 26 min – 5 hr 35 min)	<input checked="" type="checkbox"/> Heavy	8/10 Hours Per Day
C = Constant (67-100%, more than 5 hr 35 min)	<input type="checkbox"/> Very Heavy	5/4 Days Per Week

This is classified as a HEAVY job by the US Department of Labor.

PHYSICAL DEMANDS		FREQUENCY					ACTIVITY DESCRIPTION
	% Time	N	S	O	F	C	
Sitting					X		Up to 1 hr./time, 3 hrs. total while completing paperwork, driving a County vehicle, boom truck and scissor lift. Also plows snow.
Standing					X		Up to 5 min/time, 4hrs total on concrete, tile, vinyl, carpet, rubber mat, dirt and uneven surfaces to repair equipment, plumbing fixtures, cranes, hydraulic systems; welding, grinding, performing backflow duties, cleaning vaults, fire system maintenance and working in scissor/boom lift.
Walking					X	X	Up to 300 yds., 15 min./time, 5-6hrs total on flat cement, uneven ground while traversing within the facility as well as 12 rail stations. Walks to/from truck at all facilities.

Lifting floor – waist	N	S	O	F	C	lbs.	Up to 50# while loading/unloading tool boxes/bags. 100# metal grates. 25# up to 2-3 min/time, 1.5hrs. total while manipulating power tools, equipment parts, tool kits. <10# hand tools and equipment parts.
		50-100	25	<10			
Lifting waist–shoulder	N	S	O	F	C	lbs.	Up to 50# while loading/unloading tool boxes/bags. 25# up to 2-3 min/time, 1.5hrs. total while manipulating power tools, equipment parts, tool kits. <10# hand tools and equipment parts.
		50	25	<10			
Lifting above shoulder	N	S	O	F	C	lbs.	2# up to 1 min/time, 45 min. total while manipulating power tools, equipment parts, tool kits. <10# hand tools and equipment parts.
		20	<10				



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Carry (Dist.)	N	S	O	F	C	5-50 lbs.	50# loading/unloading equipment as well as manipulating pumps, small engines, toolboxes and tool kits. <10# hand tools and equipment parts. Cart is available on most occasions.
		50'	25'	15'			
Pushing/ Pulling	N	S	O	F	C	Minimal	100# metal grate. 25# up to 2-3 min/time, 1.5hrs. total while manipulating power tools, equipment parts, tool kits. <10# hand tools and equipment parts.
		100	25	<10		lbs force	

	N	S	O	F	C	
Climbing				X		Up to 40' for up to 1 min./time, 3 hrs. total while working on overhead door assemblies, piping, fire systems, HVAC systems, etc. Utilizes ladders, lifts, stairs and enclosed silo ladder.
Balancing				X		Up to 1hr./time, 5 hrs. total walking on wet/slick floors, near service pits, ladders and scissor/boom lifts while manipulating awkward and/or heavy materials.
Stooping / Bending*				X	X	Up to 5 min./time, 5-6 hrs. total while reaching for tools, installing and maintaining low pipes, fabricating parts, welding various pieces of equipment and materials, repairing equipment, retrieving parts from storage areas. *Bending/stooping may be reduced by alternating with kneeling or squatting.
Twisting			X			Up to 5 min./time, 2 hrs. total while repairing equipment in awkward postures.
Squatting / Kneeling*				X	X	Up to 5 min./time, 5-6 hrs. total while reaching for tools, installing and maintaining low pipes, fabricating parts, welding various pieces of equipment and materials, repairing equipment, retrieving parts from storage areas. *Kneeling may be reduced by alternating with bending/stooping.
Crawling		X				Up to 20', for up to 2 min./time, 10 min. total while fabricating parts, drilling holes in shelters, loosening/tightening bolts, installing, maintaining and removing equipment, piping, pumps and drainage systems. Work may be performed in pits or vaults (confined space).
Foot Controls				X		Up to 1.5 hrs./ time, 3 hrs. total while driving a County truck or van as well as operating various pieces of equipment, such as presses, TIG welder, boom trucks, snow plow.



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	N	S	O	F	C	
Reaching (Level)	Forward			X		Up to 2 hrs./time, 5 hrs. total while using hand tools, cutting materials, performing bench work, loading parts in/out of a service truck, welding, plumbing and completing documentation.
	Below Waist			X		Up to 5 min./ time, 5 hrs. total while reaching for tools, installing and maintaining low pipes, fabricating parts, welding various pieces of equipment and materials, repairing equipment, retrieving parts from storage areas.
	Above Shoulder		X			Up to 5 min./time, 2 hrs. total while working on overhead door assemblies piping, welding, inspecting piping and cranes and ventilation.
Handle/Grasp					X	Up to 1.5 hrs./time, 8-9 hrs. total while using hand tools, welding, manipulating materials, driving, using clamps and using power tools.
Fine Finger Manipulation		X				Up to 10 min./time, 1 hr. total while manipulating small pieces of hardware, manipulating keys and installing/removing bolts and screws as well as when stick welding, performing tool maintenance and using bits/punches.
Hand Controls			X			Up to 1.5 hrs./time, 8-9 hrs. total while using hand tools, welding, manipulating materials, using clamps and using power tools as well as when operating various pieces of equipment such as presses, pressure washer, sand blaster, welders, shear, sand blaster, boom trucks, and snow plow.
Repetitive Motion	X					Body part: <input type="text"/> Cycles/hr. <input type="text"/>
Vibratory Tasks			X			5 min./time, 2 hrs. total while using impact tools.
Talking			X			Up to 10 min./time, 1.5 hrs. total with coworkers and superiors
Hearing					X	Up to 2.5 hrs./time, 8-9 hrs. total while conversing with co-workers and supervisors as well as identifying equipment failure and potential hazards such as moving trains and vehicles.

Visual:

Continuously watches for trains as work is performed around active tracks at all times. Must be able to identify potential hazards and failing equipment.



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ENVIRONMENTAL CONDITIONS	FREQUENCY					ENVIRONMENTAL CONDITIONS	FREQUENCY				
	N	S	O	F	C		N	S	O	F	C
Exposure to Weather			X			Noise Intensity			X		
Extreme Cold		X				Atmospheric Conditions			X		
Extreme Hot			X			Exposed Heights			X		
Wet and / or Humidity			X			Exposure to Electricity			X		
Proximity to Moving Mechanical Parts					X	Exposure to Toxic / Caustic Chemicals			X		
Exposure to Explosives	X					Exposure to Radiation	X				

Other: live1500 volt DC overhead power lines, confined spaces.

Analyst's Comments:

Employee works around live1500 volt DC overhead power lines and must be cognizant of them at all times, especially when performing work in lifts.

Work is sometimes performed in confined space.

Employee must be able to comprehend complex procedures for safety sensitive and critical equipment such as fire systems, ventilation and boilers.

Possible Employer Modifications:

Note: The information for this job analysis was gathered by either on-site observation, interview and / or is representative of the labor market as indicated on page one. Additional data may have been obtained from standardized industry resources such as the DOT, GOE, COJ, OOH, WOIS and O-NET. On occasion, practicality and feasibility prevent the direct observation and/or gathering of objective, quantifiable data. For this reason, a "best estimate" may have been used.

Analyst:

Kyle Pletz, VRC, CDMS

4/13/16

Vocational Consultant

Date

Presenting VRC signature:

Vocational Consultant

Date

Employer Verification:

Ian Bennett

4/13/16

Name

Date

Employee Verification: (optional)

Name

Date



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MEDICAL PROVIDER:

- ☐ I agree that the employee can perform the physical activities described in this job analysis and can return to work.

State date employee is released to return to work if different from today's date _____

- ☐ I agree the employee can perform the described job but only with modifications (describe in comments section). Modifications are needed on a permanent ☐ or temporary ☐ basis.

- ☐ The employee **temporarily** cannot perform this job based on the following physical limitations:

Anticipated release date: _____

Treatment plan: _____

- ☐ The employee is **permanently** restricted from performing the physical activities described in this job analysis based on the following physical limitations (state objective medical findings):

Comments:

Signature

Date

Print Name

- | | | |
|--|---|---|
| <input type="checkbox"/> Attending Physician | <input type="checkbox"/> Consulting Physician | <input type="checkbox"/> Pain Program Physician |
| <input type="checkbox"/> IME Physician | <input type="checkbox"/> PCE Therapist | <input type="checkbox"/> OT / PT Therapist |
| <input type="checkbox"/> PEP Physician | | |