

Job Demands Analysis - MOTORIZED LITTER CART OPERATOR

Purpose

- The purpose of the Motorized Litter Cart Operator is to remove garbage from the City of Vancouver's streets.

Essential Duties

- The Motorized Litter Cart Operator has 1 essential duty:
(1) Street cleaning

Summary of Demands

	Sedentary	Light	Medium	Heavy	Very Heavy
Physical		X			
Cognitive		X			

Workers require physical endurance to:

- Continuously stand and walk (35-55 % of their shift).

Shift Structure

- Motorized Litter Cart Operators work 7:00 am to 3:30 pm. They get a 30 minute meal break and two 15 minute rest breaks.



Job Demands Analysis - Motorized Litter Cart Operator: Summary Table

a) Physical Demands		Frequency During Shift*					Weight		Comments	
		Never	Rare	Infrequent	Occasional	Frequent	Constant	Usual (kg)		Max (kg)
Strength	Lifting - Floor to Knuckle				X			1-5	15	Emptying pail/shovel
	Lifting - Knuckle to Waist				X			1-5	15	Lifting empty waste containers
	Lifting - Over Head		X					1-5	15	
	Carrying - with Handles				X			1-5	15	Waste Pail
	Carrying - without Handles			X				1-5	15	Cleaning equipment
	Pushing - Upper Extremity		X					1-5	15	
	Pushing - Hips/Legs assist		X					1-5	15	
	Pulling - Upper Extremity		X					1-5	15	
	Pulling - Hip/Leg Assist		X					1-5	15	
	Reach - Shoulder or Above			X						
	Reach - Below Shoulder				X					Sweeping garbage from streets
	Handling				X					Use of tongs
	Mobility	Fine finger movements			X					
Neck - Static Flexion					X					
Neck - Static Neutral						X				
Neck - Static Extension					X					
Neck - Rotation					X					Looking for garbage
Throwing			X							
Sitting						X				Driving truck
Standing					X					
Walking					X					Walking route, picking up litter
Running/Jumping		X								
Climbing			X							
Bending/Stooping				X						Picking up garbage using tongs
Crouching			X							
Kneeling		X								
Crawling		X								
Twisting		X								
Balancing		X								
Travelling						X			Through assigned cleaning area	



Job Demands Analysis - Motorized Litter Cart Operator: Summary Table (continued)

a) Physical Demands (continued)		Frequency During Shift						Comments
		N	R	I	O	F	C	
Sensory / Perception	Hear/Conversations			X				
	Hear/Other Sounds						X	Vehicles, pedestrians
	Vision/Far						X	Looking for garbage
	Vision/Near		X					Driving
	Vision/Colour		X					
	Vision/Depth						X	Driving
	Perception/Spatial						X	
	Perception/Form			X				
	Feeling	X						
	Speech		X					
Work Environment	Inside Work		X					
	Outside Work						X	
	Slippery			X				Dependant upon the weather
	Congested worksite			X				Pedestrians on sidewalk, merchants placing items on sidewalk
	Chemical Irritants		X					Potential for chemicals in garbage
	Confined Space Entry	X						
	Vapour Fumes		X					Traffic exhaust
	Noise			X				Vehicles
	Proximity to Moving Objects					X		Vehicles on streets
	Hazardous Machines	X						
	Electrical hazard	X						
	Sharp Tools	X						
	Radiant/Thermal Energy	X						
	Hot/Cold				X			Dependent upon the weather
	Humid	X						
	Dust			X				
	Organic Substances		X					
	Medical Waste		X					May encounter used needles
	Blood Products		X					May encounter used needles
	Lighting - Direct						X	
Lighting - Indirect	X							
Vibration - Whole Body	X							
Vibration - Hand/Arm	X							



Job Demands Analysis - Motorized Litter Cart Operator: Summary Table (continued)

b) Cognitive and Psychosocial Demands	Frequency During Shift			Comments
	Never / Rare	Infrequent / Occasional	Frequent / Constant	
Degree of Supervision	X			
Time Pressure			X	Frequent occasions where there is a lot of garbage
Attention to Detail			X	Need to be able to spot litter
Memory		X		Need to remember where garbage bins are located in various areas.
Interact with co-workers	X			
Interact with public			X	Interactions with the general public
Work Alone			X	
Reading	X			
Writing	X			
Irregular Hours	X			
Operating Equipment			X	Driving pickup truck

Frequency rating definitions

* The frequency rating definitions are from the Dictionary of Occupational Titles (DOT, 1991, 4th edition) published by the US Department of Labor.

	Time per Day	Percentage of Shift
Never	0 minutes	0 %
Rare	0 - 5 minutes	0-1 %
Infrequent	6 - 25 minutes	2-5 %
Occasional	26 minutes - 2.5 hours	6-33 %
Frequent	2.6 - 5.25 hours	34-66 %
Constant	5.26 - 8 hours	67-100 %



Physical Environment

The work takes place at the City of Vancouver's streets. The Motorized Litter Cart Operator is required to travel through an area picking up garbage. The Motorized Litter Cart Operator works outside in a variety of weather conditions. They can go in and out of their truck between 50-100 times a shift. Seasonal variation is also occurs. Residential areas are slower during the summer months and busier during the winter months.

Staffing Levels

The Motorized Litter Cart Operator will work alone for most of their shift.

Tools and Equipment Used

The Motorized Litter Cart Operator uses a variety of supplies and tools while working. The list includes: a rake or broom, shovel or dust pan, tongs and a pail, and a container (the yellow container in figure 4) and tongs for needles.

Other Equipment

Garbage containers, gloves, high visibility safety vests.



Description of Essential Duties

Essential Duty 1: Street Cleaning

The tasks that make up Essential Duty 1 (Street Cleaning) are: rake streets (Task 1), empty waste (Task 2), needle pick up (Task 3).

Rake/Sweep Streets (Duty 1, Task 1)



Figure 1: Rake and Shovel

The Motorized Litter Cart Operator has an assigned territory to clean each week. They start their shift at Manitoba Yards. They drive a Ford Ranger pickup truck to their territory. When they reach their cleaning route for the day they will park their truck. They will either use a rake and shovel (see Figure 1) or a broom or tongs and a pail to collect garbage lying in the area. They use the rake to sweep the accumulated debris into the shovel or tongs to pick up garbage. If they finish their daily route early, the Motorized Litter Cart Operator will start the next part of their route.



When the shovel/pail is full, the Motorized Litter Cart Operator will lift the shovel or dust pan and empty the contents into a waste container located nearby or into the back of their pickup truck. The lift is 1 metre if they empty their pail in a public garbage can or 1 ½ metres if they dump their pail into the back of their truck.

Empty Waste (Duty 1, Task 2)

When the back of the pickup truck is full, the Motorized Litter Cart Operator needs to empty it. To empty it, the Motorized Litter Cart Operator drives their truck to either the Vancouver South Transfer Station (VSTS) or Cambie yard. At the VSTS they will drive to the commercial dumping area. They will back their truck up to the edge of the garbage pit and flick the dumping switch. The bed of the truck tilts causing the accumulated garbage to fall into the pit. This is generally done at the end of the shift.

Needle Pick Up (Duty 1, Task 3)

The Motorized Litter Cart Operator has tongs (see figure 2). Any needles are picked up using the tongs and deposited into a used needle container similar to the container pictured in Figure 3. The needle container is taken to various needle exchange areas located within the Motorized Litter Cart Operator's territory when it gets full.





Figure 2: Tongs

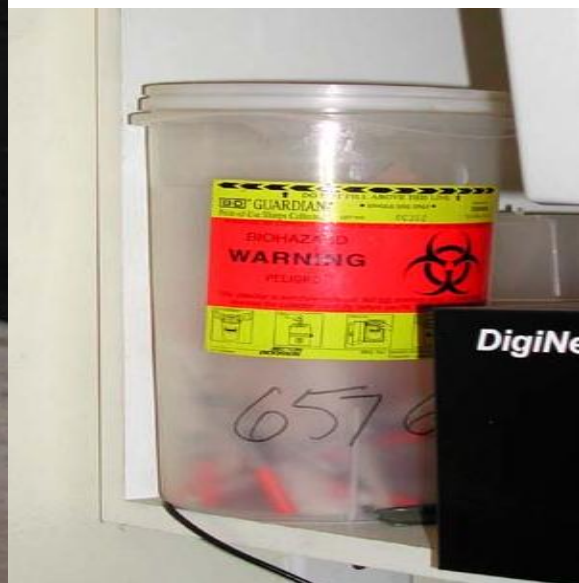


Figure 3: Sharps Container



Description of Non-essential Tasks

The Motorized Litter Cart Operator may be required to perform other work tasks on an occasional basis. Examples of the tasks that may be performed are: giving directions to the public, reporting heavy objects (such as couches) to abandoned garbage for pick up, salting street corners during snowfall, reporting cracks in the sidewalk, reporting blocked storm drains, and reporting blocked sidewalks to bylaw enforcement.

Data Collection

The PDA observations took place on Oct, 2004. The employee was observed for 1 hour performing their duties.

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