



154 Meadowlark Health Centre  
156 Street & 87 Avenue  
Edmonton, Alberta T5R 5W9  
Tel (780) 429-4761  
Fax (780) 425-4274  
Toll Free 1-800-493-5446

## Physical Demands Analysis

### Scaffolder

Prepared for:  
Alberta Construction Association

<b>Job Title:</b>	Scaffolder	<b>Assessment Location:</b>	Edmonton, AB	<b>Data Collection Date:</b>	June 17, 2021
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<b>Completed By:</b>	Joanna Ellingson, BKin	<b>Submitted on:</b>	July 11, 2021
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<b>Disclaimer:</b>	The Physical Demands noted in this report may vary depending on company and location. Please contact the company directly to confirm this physical demands analysis is an accurate representation of the specific job title for the specific location.
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<b>Work Schedule:</b>	<b>Shift Duration:</b> 4 days/week, 9.5 hours/day; 1 day/week, 8.25 hours/day <b>Break Schedule:</b> Total of 1 hour break per day / 2-15 minute coffee breaks, 1-30 minute lunch break <b>Shift Rotation:</b> Not applicable <b>On call is required:</b> No <b>Overtime required:</b> No; but may be available upon Foreman discretion
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<b>Education / Experience:</b>	<b>Tickets that may be required (not limited to):</b> Fall protection, First Aid, WHMIS, Construction Safety Training Systems (CSTS) and Basic Safety Orientation (BSO).
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<b>Labour Provider:</b>	N/A
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<b>Job Overview:</b>	As a scaffolder, the worker is required to work with the crew to move material onto site, install scaffolding material and tear down scaffolding material.		
	% of shift	Job Task	Task Description
	2.0%	Tailgate talk	<ul style="list-style-type: none"><li>The scaffolding crew's plan for the day including progress on site thus far and from previous day, plan for remaining projects required and updates on any changes required for remaining projects.</li><li>Discuss any safety concerns/hazards and updates related to the day's work.</li><li>Hazard assessment discussion and where scaffolders will be working for the day.</li></ul>
	2.0%	Stretching	<ul style="list-style-type: none"><li>Completing a stretch with the crew before starting the day's work.</li></ul>

	20%	Moving material and equipment	<ul style="list-style-type: none"> <li>Transport material onto site from work trucks and shop including scaffolding structures, various equipment required, personal workers tools.</li> <li>This may be done manually with workers lifting/carrying or mechanically using assistive equipment (depending on site).</li> </ul>
	38%	Installing scaffolding materials	<ul style="list-style-type: none"> <li>As a crew, the scaffolder will assist in installing the scaffold systems, fittings, decks, etc.</li> <li>Installation can require the worker to kneel, sit, stand, crouch, reach at elevated heights, trunk rotate, trunk flex, squat, etc.</li> <li>Each crew worker will use fall arrest while working at heights during installation.</li> </ul>
	30%	Tear down scaffolding materials	<ul style="list-style-type: none"> <li>Once notified by the scaffolding foreman, the crew will tear down the scaffolding systems, fittings, decks, etc.</li> <li>Tear down can require the worker to kneel, sit, stand, crouch, reach at elevated heights, trunk rotate, trunk flex, squat, etc.</li> <li>Each crew worker will use fall arrest while working at heights during tear down.</li> </ul>
	1.0%	Foreman inspection	<ul style="list-style-type: none"> <li>The foreman will inspect scaffolding structures every 2 weeks to ensure proper installation and tear down.</li> </ul>
	5.0%	Clean up/storing tools and equipment	<ul style="list-style-type: none"> <li>Cleaning all materials, tools and equipment used throughout the day as well as cleaning site/areas worked throughout the day.</li> <li>Storing tools and equipment in specified Clark Builders storage area on site.</li> </ul>
	2.0%	Safety meeting	<ul style="list-style-type: none"> <li>Completed every Friday at 12:30 pm to discuss topics of safety (directed by Foreman) and to address any safety concerns in detail.</li> </ul>

<b>Exposures / Environment:</b>	<ul style="list-style-type: none"> <li>Noise exposure</li> <li>Heat/Cold weather extremes</li> <li>Wind</li> <li>Tripping hazards</li> <li>Working at heights</li> </ul>
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<b>Personal Protective Equipment Required:</b>	<ul style="list-style-type: none"> <li>Hard hat</li> <li>Steel toed boots</li> <li>Gloves</li> <li>CSA safety glasses</li> <li>Safety vest or high visibility stripes</li> <li>Long pants</li> </ul>
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	<ul style="list-style-type: none"> <li>Kneeling pads</li> </ul>
<b>Personal Protective Equipment as Required:</b>	<ul style="list-style-type: none"> <li>Fall arrest protection</li> <li>Mask</li> </ul>

NOC STRENGTH LEVEL KEY	
Strength Level	Definition
Limited (Lim)	Up to 5 kg (11 pounds)
Light (L)	5 kg to 10 kg (11 – 22 pounds)
Medium (M)	10 kg to 20 kg (22 – 44 pounds)
Heavy (H)	Greater than 20 kg (44 pounds plus)

*\*Strength Level Key based on the National Occupational Classification*

FREQUENCY KEY		
Frequency	% of Workday	Hours – Based on 8 hour Workday
Not Required (N/R)	0%	0
Rarely (R)	1 – 5%	<25 min/day
Occasionally (O)	6 – 33%	25 min to 2 hours 40 min/day
Frequently (F)	34 – 66%	2 hours 41 min to 5 hours 17 min/day
Constantly (C)	67 – 100%	5 hours 18 min to 8 hours/day

*\*Frequency Key based on WCB Alberta Recommendations*

Job Demand	Frequency / NOC Strength Level					Details/ Measurements
	N/R	R	O	F	C	
Material Handling:						
Floor to Waist Level Lifting			H	L		Lifting scaffolding materials, equipment and scaffolder's tools during material and equipment move, installation and tear down, during site clean up.
Knee to Waist Level Lifting			H	L		Lifting scaffolding materials, equipment and scaffolder's tools during material and equipment move, installation and tear down, during site clean up.
Waist to Waist Level Lifting			H	L		Lifting scaffolding materials, equipment and scaffolder's tools during material and equipment move, installation and tear down, during site clean up.
Waist to Chest Level Lifting		H		L		Lifting scaffolding materials, equipment and scaffolder's tools during material and equipment move, installation and tear down, during site clean up.

<b>Waist to Shoulder Level Lifting</b>				L		Passing scaffolding materials and equipment during installation and tear down, during site clean up.
<b>Waist to Overhead Level Lifting</b>				L		Passing scaffolding materials and equipment during installation and tear down, during site clean up.
<b>Front Carry</b>			H	L		Carrying scaffolding materials, equipment and scaffolder's tools during material and equipment move, installation and tear down, during site clean up.
<b>Right / Left-handed Carry (Dominant Hand)</b>			H	L		Carrying scaffolding materials, equipment and scaffolder's tools during material and equipment move, installation and tear down, during site clean up.
<b>Shoulder Carry</b>				L		Carrying scaffolding materials equipment during material and equipment move, during site clean up.
<b>Static Pushing/Pulling (Force)</b>			H			Completing finish fit for scaffolding material during installation, initial phases of tear down with scaffolding material.
<b>Dynamic Pushing/Pulling (Force)</b>			H	L		Hammering pins into scaffolding materials, initial phases for scaffolding material during installation, finishing phases of tear down with scaffolding materials.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Upper Extremity Work:						
Hand Gripping					X	Gripping scaffolding materials (during material and equipment move, installation and tear down), equipment and scaffolders tools, gripping latches to secure rods, operating and transporting fall arrest equipment, during site clean up removing excess materials and garbage, etc.
Pinch Gripping				X		Adjusting carabiner on fall arrest equipment, handling and installing/removing pins from scaffolding materials during all phases (material move, installation and tear down).

<b>Upper Extremity Coordination</b>					X	Gripping scaffolding materials, equipment and scaffolders tools during all phases, gripping latches to secure rods, operating and transporting fall arrest equipment during installation and tear down, adjusting carabiner on fall arrest equipment during installation and tear down, handling and installing/removing pins from scaffolding materials, during site clean up removing excess materials and garbage, etc.
<b>Reaching Forward</b>					X	Pass materials across scaffold to crew workers during installation and tear down, gripping scaffolding materials to secure worker's body in position during installation and tear down, reaching for latches to secure rods, operating and transporting fall arrest equipment during installation and tear down, adjusting carabiner on fall arrest equipment, handling and installing/removing pins from scaffolding materials, during site clean up removing excess materials and garbage, etc.
<b>Overhead Shoulder Level Reaching</b>				X		Passing materials to crew worker above during installation and tear down, gripping scaffolding materials to secure worker's body in position, reaching for latches to secure rods, operating and transporting fall arrest equipment, adjusting carabiner on fall arrest equipment, handling and installing/removing pins from scaffolding materials, during site clean up, etc.
<b>Below Shoulder Level Reaching</b>				X		Passing materials to crew worker below during installation and tear down, gripping scaffolding materials to secure worker's body in lower position, reaching for lower level latches to secure rods, operating and transporting fall arrest equipment to lower levels, adjusting carabiner on fall arrest equipment, handling and installing/removing pins from scaffolding materials, during site clean up, etc.
<b>Throwing</b>	X					Not required.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Positional Work:						
Trunk Flexion (Bending)				X		Leaning forward to retrieve and adjust materials during installation and tear down, installing/removing lower level materials, during site clean up, etc.
Trunk Rotation (Twisting)			X			Rotation to retrieve and adjust materials during installation and tear down, installing/removing lower level materials, during site clean up, etc.
Kneeling			X			Retrieving and adjusting lower level materials during installation and tear down, installing/removing lower level materials, during site clean up, etc.
Crawling		X				Retrieving and adjusting lower level materials during installation and tear down, installing/removing lower level materials, during site clean up, etc.
Crouching			X			Retrieving and adjusting lower level materials during installation and tear down, installing/removing lower level materials, during site clean up, etc.
Squatting			X			Retrieving and adjusting lower level materials during installation and tear down, installing/removing lower level materials, during site clean up, etc.
Neck Flexion				X		During material and equipment move, installation and tear down, during site clean up, checking surroundings, etc.
Neck Extension				X		During material and equipment move, installation and tear down, during site clean up, checking surroundings, etc.
Neck Rotation				X		During material and equipment move, installation and tear down, during site clean up, checking surroundings, etc.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Static Work:						
Sitting		X				During breaks.
Static Standing				X		During tailgate talk, scaffolding installation and tear down.

<b>Balancing</b>					X	On scaffolding materials during installation and tear down, on site as required.
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Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Ambulation:</b>						
<b>Walking: Level Surfaces</b>			X			Walking throughout site (indoors/outdoors); frequency depending on progress of site (beginning vs. finishing stages).
<b>Walking: Uneven Surfaces</b>					X	Walking on scaffolds, throughout site (indoors/outdoors); frequency depending on progress of site (beginning vs. finishing stages).
<b>Walking: Slopes</b>		X				Dependent on site (outdoors).
<b>Jumping</b>	X					Not required.
<b>Running</b>	X					Not required.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Climbing:</b>						
<b>Stairs</b>			X			Throughout site to access various levels.
<b>Ladder</b>			X			To access various levels of scaffolds on various floors on site.
<b>Other</b>					X	Accessing scaffolds, mechanical lifts (as available on site).



## PHOTOS OF TASKS AND WORK ENVIRONMENT

**Figure 1:** Various positions being demonstrated within crew workers during installation phase.



**Figure 2:** Installing scaffolding materials at the top level.



**Figure 3:** Balancing on scaffolding material and deck during installation phase.





Physical Demands Analysis  
Job Title: Scaffolder  
Date Prepared: July 11, 2021  
Prepared for: Alberta Construction Association



If you have any questions, and/or would like to discuss this assessment and report further, I can be reached at (780) 429-4761.

Sincerely,

A handwritten signature in grey ink, appearing to read "J. Ellingson".

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**Joanna Ellingson, BKin**  
**Kinesiologist**

**SITE SPECIFIC JOB DEMAND ADDITIONS:**

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Site Specific Job Demand:						

### Validation Agreement

<b>Job Title:</b>	Scaffolder
<b>Data Collection Date:</b>	June 17, 2021

We the undersigned have reviewed the Physical Demands Analysis for this position and agree that the physical demands documented in this report are representative of the true demands of the tasks associated with the job title as assessed on the date listed above.

<b>Completed by:</b>	Joanna Ellingson, BKin	Lifemark Clinician Name and Credentials
<b>Approved by:</b>		Management Representative
<b>Approved by:</b>		Worker Representative
<b>Approved by:</b>		Labour Provider Representative