

Safe Work Procedure Ladder and Scaffolding Safety

OSEM 18.14.2

Program/Services Facilities, Trades, Contractors	Safe Work Procedures		Department: Safety and Emergency Management
Personal Protective Equipment or Devices Used <ul style="list-style-type: none"> • Safety Glasses • Gloves • Work Boots • Fall Arrest restraint system 	Training Requirements <ul style="list-style-type: none"> • Proper handling of ladders and scaffolds • Hands on training • Ladder and scaffolding inspection safety 	Applicable Documents <ul style="list-style-type: none"> • Ladder Inspection Form • Scaffold Inspection Form 	Effective Date: April 17, 2019

FALL FROM HEIGHTS



Ensure:

- Lanyard is attached to anchor point
- Guardrails are in place
- Ladder has a level footing
- You have a three-point contact while ascending, working or descending a ladder
- Inspect and document before use

FOOT INJURY



Approved protective footwear is required when there is the risk of foot injury due to slipping, uneven terrain, and abrasion, crushing potential, temperature extremes, corrosive substances, puncture hazards, electrical shock and any other recognizable hazard.

Note:

- Before use, ladders must be inspected and the inspection documented using the ladder inspection form.
- After using all ladders must be returned to designated storage areas.

DO	DO NOT
<p>Portable Ladders:</p> <ul style="list-style-type: none">• Must be inspected by a competent worker prior to each use. This inspection must be documented on the Ladder Inspection Form.• Must be a Grade 1 or 2 fiberglass or aluminum ladder.• Grade 1 shall not exceed 9m (30ft) in length.• Must be free of broken or loose members.• Must be located a safe distance from live electrical installations; must have non-slip feet.	<ul style="list-style-type: none">• Do not make contact with electrical wiring or devices,• Do not stand on or above the third rung from the top,• Do not place in the path of mobile cranes, hoists, etc., unless these devices have been locked out, and when used in locations such as doorways or passageways must be protected from being knocked over.

WARNING: Always use ladders safely - use alternative man lifts where possible and practical to do so.

LADDERS

The following must be complied with when using portable ladders to access elevations up to 25 feet:

- 3-point contact (two feet, one hand or two hands, one foot) must be maintained prior to connecting the fall arrest system and after the fall arrest system is disconnected.
- Ladder tops must rest on a firm structure and be secured.
- Ladders must be tied, blocked, or otherwise secured to prevent them from slipping.
- Personal climbing ladders, which are not tied off at the top, must have another person holding the ladder at the bottom until it can be secured. This includes the last trip down after untying the ladder at the top.
- Upon reaching the elevation the work is to be performed, the person on the ladder shall properly connect his/her fall protection system before doing anything else.

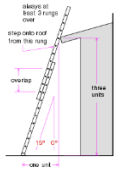
- Ladder must be tied off before work can begin.
- When the task is complete, the fall arrest system is the final protective device to be removed before descending.

STEPLADDERS:



- The legs of a stepladder must be fully spread, the spreader brace must be locked.
- Never use the pail shelf (top step) of a stepladder to support your weight.
- Stand no higher than the second tread from the top of the step ladder.
- Step ladders may not exceed 6 meters (20 feet) in length measured along the side rail.
- Where possible, use a second person to hold (foot) the ladder.
- Grade 1 stepladders shall not exceed 6m (20ft) in length.
- Avoid contact with electrical wiring or devices.
- Do not overreach.

EXTENSION LADDERS:



Grade 1 extension ladders may not exceed when measured along the side rail:

- Eighteen meters (60 feet) in length for a single section ladder or
- Twenty-two meters (72 feet) in length for a two section extension ladder.

When not securely fastened, an extension ladder:

- Must be erected 1 meter (3.3 feet) out for every 3 or 4 meters (10-13 feet) up, and
- The ladder must extend 90 centimeters (3 feet) above the top surface access.

Records/Verification of Understanding

- Ladder Inspection Records are to be kept with the Supervisor and a copy forwarded to TRU Safety Department

SCAFFOLDING



Scaffolding must be inspected before use and the inspection documented using the Scaffold inspection checklist. The completed checklist will be filed with the Supervisor.

Scaffold Design:

A scaffold must be designed by a professional engineer and must be erected in accordance with the design if the scaffold exceeds:

- Two times the maximum load or force to which it is likely to be subjected, without exceeding the allowable unit stresses for the materials of which it is made, and
- Four times the maximum load or force to which it is likely to be subjected without overturning.

A scaffold platform or other work platform:

- Must be at least 50 centimeters (20 inches) wide.
- If it is 2.4 meters (8 feet) or more above a floor, roof or another surface, it must consist of planks laid tightly side by side for the full width of the scaffold.
- If it is 2.4 meters (8 feet) or more above a floor, roof or another surface, it must consist of planks laid tightly side by side for the full width of the scaffold.
- Must be provided with a guardrail as required.
- Must have an adequate means of access.
- Must not have any unguarded openings.
- Must have each component secured against slipping from its supports.

Scaffold Selection:

It is important to select the proper scaffold for the task to be completed. Selection criteria include:

- The weight of workers, tools, equipment to be carried on the scaffold.
- Site conditions.
- Height required.

- Type of work to be completed.
- Duration of work.
- Experience of workers.
- Pedestrian traffic.
- Weather.
- Ladders and access to the platform.
- Obstructions.
- The configuration of building or structure to be worked on.
- Erection and dismantling conditions.
- Use of equipment to be used in the erection of the scaffold.

Scaffold Location:

The location should be inspected for:

- Ground/floor conditions.
- Overhead wires and other overhead hazards.
- Obstructions.
- Variation in surface elevation.
- Tie in locations.

Erecting Scaffold:

Major components of scaffolds must be used in accordance with technical data provided by the manufacturer, or in writing by a professional engineer.

Scaffolds must show the rated load, erection procedures and compliance with an applicable standard.

All components of the scaffolding will be used each time it is erected, including the following:

- base plates,
- braces,
- proper securing devices,
- tie-ins,
- advance planning considerations will be followed during the erection process,
- each component of the scaffold will be visually inspected before use,
- defective or broken pieces/material will not be used,
- if the wood is being used only approved lumber will be used, and
- Mudsills must be used if erected on the soil.

Pre-inspection of erected scaffolding:

Only competent workers will conduct pre-inspection.

CSA standards for the particular type of scaffolding will be used and followed.

The following is a pre-use inspection guideline:

- Severely rusted components should be thoroughly inspected and cleaned before approved for use.
- All members or parts of all steel scaffolding components should be straight and free from bends, kinks or dents.
- Scaffolding equipment should be checked before use for damaged welds.
- Check locking devices.
- Check the alignment of coupling pins and braces.
- Check caster brakes (rolling scaffolds).
- Check for damage to hooks on manufactured platforms.
- Check for splitting, knots and dry rot in planks.
- Check for de-lamination of laminated veneer lumber planks.
- Check for compatibility of components.
- Check for the presence of all components.

Final inspection of erected scaffolding:

Only competent workers will conduct the final inspection of erected scaffolding.

The following final inspection checks must be made and documented where stated:

- Check for proper support under every leg of every frame
- If outside, check for washout due to rain etc.
- Check to ensure all base plates or adjustment screws are in firm contact with supports.
- Ensure that the scaffold is guyed or secured to a building or structure.
- Check serviceability and correctness of all cross braces.
- Check to ensure that all planking and accessories are properly installed.
- Check to ensure that all guardrails are in place.
- Recheck periodically to ensure the scaffolding remains safe.
- The person inspecting the erection of the scaffold must state in writing that the scaffold is erected in accordance with the design drawings.
- The design drawings and the written statement for a scaffold must be easily accessible while the scaffold is erected.

Dismantling of scaffolding:

Only competent workers will supervise the dismantling of scaffolding.

The following is a guideline:

- Manufacturers dismantling instructions will be followed.
- Relocation planning considerations will be considered during the dismantling process.
- Each component will be visually inspected after use.
- Defective or unserviceable materials will not be stored with serviceable materials.
- Avoid dropping or throwing the components as this could result in damage to the equipment.

Cleaning and Maintenance:

- Hang ladders in a dry place.
- Do not paint wooden ladders; treat at frequent intervals with wood preservative or clear coating (wooden ladders only).
- Plastic reinforced ladders may be affected by prolonged sunlight exposure which can cause glass fiber prominence. If this occurs clean the ladder with a suitable solvent or detergent and coat with acrylic lacquer or polyurethane.
- Keep a metal or aluminum scaffolding lubricated to prevent rust.
- Clean regularly to prevent the build-ups of dirt and other substances. Do not use a pressure washer on metal or aluminum scaffold unless you wipe it down afterward to prevent rust. Pressure washing wooden plank boards can cause rotting.
- Repair broken or missing parts promptly. Repair or replace any planks that are soft, bent or broken.
- Store properly. Keep under cover when not in use to prolong its life and prevent people from climbing on it.

Records/Verification of Understanding

Scaffolding Inspection Records are to be kept with the Supervisor and a copy forwarded to TRU Safety Department.

SUMMARY OF CHANGES

Revision #	Date	Change (include section #)	Issued By
1	10/2011	NEW	OHS Officer
2	08/05/2014	Review and Revision	Safety Officer
3	04/17/2019	Review, Revision and New Format	Safety Officer



TRU DAILY SCAFFOLD INSPECTIONS

Inspection Person: _____

Date: _____

Project Name or #: _____

Building: _____

Scaffold Inspection	Yes	No	N/A	Comments or corrections needed
Scaffold inspected daily by competent person before use				
Guardrails and toe-boards in place over ten feet in height				
Guardrails in place on all open sides @ 38 inches				
Safe access to all scaffolds provided, such as ladders				
Minimum of two planks laid side by side, 20" width				
Planking extends 6" and no more than 12" width				
Scaffold on firm footing, plumb, square & level				
Side brackets (outriggers) are fully planked				
Side brackets have guardrail if 10 feet high or greater				
Scaffolds that are 4 times base width in height and 30 feet horizontal are secured/ anchored to the structure				
Employees are to be trained to recognize hazards of scaffolds				
Scaffolds load capacity is to be known by all employees				
Does the scaffold meet Electrical Safety Clearance				
Scaffold grade planks to be free of loose knots, splits , etc.				
Front face of scaffold to be placed within 14" of work area				
Scaffold must maintain four times maximum load intended				

TRU Portable Ladder Inspection Checklist

OSEM 10.12.2

Ladder Type/ID: _____

Location: _____

Material: Wood Metal Fiberglass

(Circle applicable material)

Inspection Dates & Initials of the person inspecting (if not applicable use N/A)		
Acceptable (A) Unacceptable (U)		Comments
Loose steps or rungs (moveable by hand)?		
Loose/missing nails, screws, bolts or other metal parts?		
Cracked, spilled, rusted or broken uprights, braces, and rungs?		
Wooden parts (smooth, no splinters)?		
Damaged or worn non-slip bases?		
Ladder stable?		
All moving parts moving freely (lubricated as required by manufacturer)?		
Wobbly (from side strain)?		
Loose or bent hinge spreaders?		
Stop on hinge spreader broken?		
Loose hinges?		
Broken, split, or worn steps?		
Loose, broken, or missing extension locks?		
Defective locks that do not seat properly while extended?		
Worn or rotted rope (if used)?		
Identification marks (legible)?		
Did the ladder store properly when not in use?		

Notes: