

SECTION 5.0

LADDER SAFETY

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Table of Contents

1	Purpose	4
2	Scope	4
3	Roles and Responsibilities	4
4	Definitions and Acronyms	5
5	Referenced and Supplementary Documents	6
6	Process Flow Diagram	6
7	Process/ Procedure/ Work Instruction	6
7.1	Selection of ladders:	6
7.2	Safety Rules for ALL Ladders	7
7.3	Safety Rules for Step Ladders	9
7.4	Safety Rules for Extension Ladders	9
7.5	Safety Rules for Platform Ladders	9
7.6	Safety Rules for Rolling Ladders (Track Supported Ladders)	9
7.7	Safety Rules for Fixed Ladders	10
7.8	Safety Rules for Telescopic Ladders	11
7.9	Ladder Inspections	11
7.10	Ladder Storage	11
7.11	Transporting Ladders	12
7.11.1	Transporting on Vehicles	12
7.11.2	Transporting by Hand	12
8	Measures	12
9	Records	13

1 Purpose

This document establishes the ALU Ladder Safety Procedure providing guidance in the proper selection, use and care of ladders.

2 Scope

This applies to all ALU Organizations and employees that utilize ladders. Where any national, international, or local legal or customer requirements or standards are more stringent than those cited in this document, these requirements shall be followed.

3 Roles and Responsibilities

Individual/Group	Role/Responsibility
Field Operations/ Business Lines	<ul style="list-style-type: none">• Use only ladders meeting Alcatel-Lucent requirements. While in most cases these ladders should belong to Alcatel-Lucent, use of ladders owned by others is acceptable in rare cases, provided the owner gives approval to use them.• Follow appropriate safe work practices for the proper selection, use, care and storage of ladders.• Ensure employees follow ladder safe work practices described in this section.• Ensure employees have been trained in Ladder Safety.• Appropriately address any issues associated with a ladder manufacturer's designated weight limit specifications.• Remove and tag all defective ladders from service immediately and ensure any ladder repair meets manufacturer's guidelines.• Ensure the acquisition and deployment of non-conductive top ladders to the field.• Ensure the availability and use of approved Personal Fall Protection Equipment by two trained Installers when having to use ladder safety systems provided for fixed ladders greater than 20 feet (6 meters) in length or having to climb fixed ladders greater than 20 feet not provided with a protective cage or a ladder safety system.

Authorized Employee	<ul style="list-style-type: none"> • Follow the procedures outlined in this document and in the Lockout/Tagout Safety training • Properly use designated Personal Protective Equipment (PPE) • Complete a Lockout/Tagout System Specific Form when required • Attend Lockout/Tagout Safety training • Perform all work functions according to instructions
Affected Employees	<ul style="list-style-type: none"> • Attend Ladder Safety Training Course. • Follow the guidelines and procedures found in this section and in the Ladder Safety training Course.
EHS Organization	<ul style="list-style-type: none"> • Corporate EHS - Provide technical content for Ladder Safety Training. • Local EHS - Assisting in the selection and assessment of ladders in order to ensure that safe ladders are ordered and safe practices are being followed. • Local EHS - Evaluating the selection and use of ladders in the field during Site Audits/Inspections. • Local EHS - Assisting in accident investigations.

4 Definitions and Acronyms

Affected Employees: Employees who utilize ladders.

Extension ladder: An extension ladder is a non-self supporting portable ladder adjustable in length. It consists of two or more sections traveling in guide or brackets so arranged as to permit length adjustment. The extension ladder's maximum size is designated by the sum of the lengths of the sections measured along the side rails.

Fixed Ladder Safety Systems: A restraining device mounted on a vertical track of a fixed ladder. This device can be connected to a front D-ring of a Personal Fall Protection Equipment Harness, and once connected, allows the user to climb or descend without any resistance. NOTE: Only harnesses provided with newer Fall Protection Kits have a front D-ring that can be used with fixed ladder safety systems. The set up of a vertical lifeline that will be required for fixed ladders 20 feet or longer in length with no cage or ladder safety system is taught in the Fall Protection training course. Refer to HB0 Fall Protection Section 48 for additional details.

Ladder: A ladder is an appliance usually consisting of two side rails joined at regular intervals by cross pieces called steps, rungs, or cleats, on which a person may step in an ascending or descending manner.

Platform ladder: A self-supporting ladder of fixed size with a platform provided at the working level.

Single ladder: A single ladder is a non-self supporting portable ladder, nonadjustable in length, consisting of one section. Its size is designated by the overall length of the side rail.

Stepladder: A stepladder is a self-supporting portable ladder, nonadjustable in length, consisting of one section. Its size is designated by the overall length of the ladder measured along the front edge of the side rail.

Telescopic Ladder: A folding ladder, on which a person may step in an ascending or descending manner, consisting of short lengths of concentric tubing which can be slid inside each other for storage.

Local EHS: Individuals designed to support a specific geographic area.

Acronyms

EHS	Environment, Health & Safety
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5 Referenced and Supplementary Documents

None

6 Process Flow Diagram

None

7 Process/ Procedure/ Work Instruction

7.1 Selection of ladders:

7.1.1 Ladder Selection Criteria:

- a. The correct height for the job. For example, a stepladder should be tall enough so the employee does not have to stand above the second step from the top.
- b. Designed for the purpose for which it will be used
- c. Appropriate for the job site conditions
- d. Equipped with non-slip shoes or similar devices for step, straight and extension ladders

7.1.2 Ladders should be selected based on their rating for use and the combined weight of the employee and all tools/supplies.

- a. **Weight rating** - Step and platform ladders must be rated to safely support at least 300 pounds (136 kg). If your circumstances exceed this weight limit you should engage the Installation Management Team.
- b. **Construction** - Ladders must be nonconductive (wood, or fiberglass with a plastic top) if they will be used where the person on the ladder or the ladder itself could come in contact with energized parts of equipment , fixtures or circuit conductors.
- c. **Length** - Unless specific authorization is given by the local EHS Organization, the maximum length of ladder used by Installation employee shall not exceed 20 feet (6 meters) for step and platform ladders, and 30 feet (9.1 meters) for extension ladders.

7.2 Safety Rules for ALL Ladders

- a. Only one person should be on the ladder at a time except that one person may be on each side of portable rolling ladders and step ladders of the A-type that have steps on both sides.
- b. When climbing or descending, face the ladder at all times and maintain 3 points of contact.
- c. Carry tools in a pouch or tool belt or raise and lower them by using a separate lifting mechanism. Raise and lower heavy items by a separate hoist.
- d. Do not put loose tools or materials on ladders. Do not leave tools or materials on unattended ladders unless securely fastened/tethered.

- e. Keep shoes, ladder feet and ladder steps free of grease, snow or liquids to prevent slipping.
- f. Do not tie or fasten ladders together to make longer sections unless fitted with manufacturer's recommended hardware fittings.
- g. Unless specifically recommended for use by the manufacturer, ladders should not be used as a brace, skid, gangway, platform, runway, scaffold, or for other uses than that for which they were intended.
- h. Maintain a clear area around the bottom and top of the ladder. Climb and descend ladders cautiously. In descending a ladder, make certain that the last step has been reached before stepping to the floor.
- i. Inspect the work area for live power lines that the ladder or person climbing the ladder could contact. If present, have the power company de-energize them or cover the lines with insulation.
- j. Look up before climbing a ladder to avoid climbing into overhead obstructions.
- k. Never move or walk a ladder while standing on it.
- l. Never lean, reach or lean too far to either side. A good rule of thumb is to keep your belly button inside the ladder's side rails at all times. Get off and move the ladder to avoid over-reaching.
- m. Never place one foot on a ladder and the other on adjacent equipment or supports.
- n. Do not push or pull in a manner that may cause a loss of balance if there is a slip. Position the steps of the ladder perpendicular to the direction of the pull whenever possible.
- o. Use a barricade or guard to prevent unexpected collisions in traffic areas. Lock or block any doors that open toward the ladder and hit it when the ladder is in use.
- p. Rest the ladder on a solid stable surface. Ladders shall not be placed on boxes, barrels or other unstable bases to obtain additional height.
- q. Ladders shall be placed to prevent slipping or otherwise secured against movement.
- r. Do not paint wood ladders with a coating that can obscure defects. Clear protective coatings such as shellac or varnish are acceptable.

7.3 Safety Rules for Step Ladders

- a. Never use in partially opened position. Spreaders must be fully opened and locked.
- b. Ladder feet must be in contact with firm and level surface.
- c. Do not step any higher than the indicated highest standing level on the ladder. If not marked, that point is no higher than the second step from the top. The top is not a step.
- d. Never climb on the bracing on the back legs to step ladders, step on the pail shelf or sit on/ or straddle the top step/ platform of a step ladder.

7.4 Safety Rules for Extension Ladders

- a. Position the ladder so the base of the ladder is one foot from the wall for every four feet of ladder length until it touches the wall. When facing the ladder with your toes placed against the side rails, you should be able to grasp the side rails with your hands by reaching straight out.
- b. Extend the ladder at least 3 feet (0.9 meters) above the landing.
- c. Provide firm and level support for base and support for both side rails.
- d. Don't climb higher than three rungs from the top of the ladder.
- e. Place the top of the ladder with both side rails supported unless equipped with a single support attachment.

7.5 Safety Rules for Platform Ladders

- a. Do not use the top railing of a platform ladder as a step or working surface.
- b. Use a platform ladder instead of a stepladder when prolonged time at one height is required.

7.6 Safety Rules for Rolling Ladders (Track Supported Ladders)

- a. Do not lift the ladder over obstacles. Move the obstacles from the ladder's path.
- b. Make certain no employee or equipment is on or below the ladder before moving it.
- c. Do not leave unattended ladders across aisles.

- d. Use only ladders that are equipped with a ladder brake (e.g., spring loaded or overhead brake or chocks.)
- e. Ask customers for chocks if they are needed and not available. Place ladder stops/chocks/blocks under the wheel nearest the equipment on which work is being done. Notify your Supervisor of locations where chocks are not available after the customer is notified. If resolution cannot be obtained, contact your local EHS resource.
- f. Do not ride rolling ladders.
- g. Use seats only on track supported ladders. Inspect wooden seats for loose nuts and screws, longitudinal cracks, and splits.
- h. Avoid contacting fuse panels, wiring, or equipment while transporting and placing ladder seats.
- i. Do not carry tools or equipment in the tool compartment of a ladder seat.
- j. Do not stand on ladder seats.
- k. Before placing body weight on a seat, check that seat is firmly and securely locked in place.
- l. Do not use a ladder supported by a defective track.

7.7 Safety Rules for Fixed Ladders

- a. Cages, wells or fall protection systems must be provided and used for fixed ladders greater than 20 feet (6 meters) in length.
- b. Personal Fall Protection Equipment must be used when having to climb fixed ladders greater than 20 feet (6 meters) in length equipped with fall protection systems or fixed ladders of that length that have no cage or no fall protection system. Refer to Fall Protection (Section 4) for details.
- c. Specialized training must be completed before wearing personal fall protection equipment, e.g., full body harness and lanyard /lifeline. Contact your local EHS Resource for details.

7.8 Safety Rules for Telescopic Ladders

- a. Ensure all safety latches are secure before stepping on the rungs.
- b. Never use in a partially opened position. Ladder should be fully extended.
- c. Hard to push latches should not be forced but rather lubricated with silicone-based lubricant and dried with a dry cloth.

7.9 Ladder Inspections

All ladders shall be inspected upon receipt and before each shift's use. Damaged or defective ladders shall be tagged (e.g., "Danger. Do not Use") and removed from service. Check for the following items:

- a. No damaged, missing or defective rungs, feet, steps or side rails.
- b. Steps, rungs and feet are free of slippery substances, (e.g., grease, oil, water)
- c. No loose rivets, joints, nuts and bolts
- d. Spreaders, shelves, hinges or other movable parts are tight but move freely.
- e. Ladder is free from structural defects.

7.10 Ladder Storage

- a. Store ladders to protect them against damage, exposure to the elements, development of permanent deformations and weakening of joints, steps, or rungs.
- b. Store ladders on racks whenever possible. If racks are not available, store portable ladders vertically and secure them against accidental movement. Horizontal storage is acceptable provided nothing is placed on top of the ladder and it is secured against accidental movement.
- c. Do not store wooden ladders in damp areas.
- d. Do not store ladders in battery rooms.

7.11 Transporting Ladders

7.11.1 Transporting on Vehicles

- a. Whenever possible, transport ladders on trucks or other motor vehicles equipped with a ladder rack. Fasten them securely in their proper position in the bracket. Never use a wire, tape or rope for securing a ladder to the bracket of a truck. A ladder hanging loosely on the brackets of a truck will be marred, cracked and weakened by road shocks.
- b. If the ladder extends 3 feet (0.9 meters) beyond the rear of the vehicle, a warning flag or light should be attached to the projecting end of the ladder.
- c. Drivers of motor vehicles transporting ladders should exercise caution to avoid letting the ladder strike trees, posts, walls or other objects, especially when backing or turning corners or driving in low clearance areas. Any ladder subjected to such a shock should be carefully inspected for damage.

7.11.2 Transporting by Hand

- a. When carrying a ladder from one place to another, guard against striking the ladder against ceiling globes, lighting fixtures, equipment, or other objects.
- b. When passing through doorways, ensure no one is coming from the opposite direction. If necessary and possible, have another person open doors and assist in going around blind corners.
- c. Do not carry an extension ladder from one location to another while it is extended. Fully retract the upper section and secure the ladder rope prior to moving the ladder.

8 Measures

Effectiveness of this Procedure will be measured through:

- a. The results of Site Safety Reviews

- b. The resolution of items found to be in need of improvement
- c. Accident Reports and Investigations
- d. Completion of Ladder Safety training by affected employees

9 Records

- Site Audits
- SABA training records
- Accident Reports

End of Document Text