**Ladder Safety**

**Definition**

This is the standard operating procedure for ladder safety

**Standard operating procedure**

Regardless of the materials used, for example, wood or aluminum, all ladders should be constructed and maintained to meet the requirements of national and/or local regulations and be marked accordingly.

The Maintenance Manager is responsible for ensuring that all ladders are checked regularly and that a record of the checks is kept.

**Scaffold Safety**

**Definition**

This is the standard operating procedure for scaffold safety

**Standard operating procedure**

Only staff that have received training and have been assessed may be authorized to erect and/or use scaffolding. This training should be recorded.

# Ladders

## Definition

This is the guideline for the technical specifications and selection of ladders for working at height.

## Guideline

### Ladders

  Portable extension and single ladders should be positioned to not exceed a gradient of 1 horizontal: 4 vertical and not used:

  In an area within the arc of a swinging door

  As permanent of semi-permanent working platform or

  To support a work platform

  The ladder should possess a minimum rating of 265 lb (120 kg). ‘A’ frame ladder stiles should be locked using a rigid metal spreader or locking device with the load carried by the front stiles. The gradient of runners should be >60º<70º and treads >3.94 in (100 mm) wide

  The ladder should be <20 feet (6.1 m) length for a single ladder or 30.2 feet (9.2 m) for an extension ladder used for electrical work or 24.6 feet (7.5 m) for other work

  Double lanyards (‘Y’ lanyard) connected to a full harness should be used for work >23.6 in (600 mm) high requiring use of fixed ladders. A ladder fall arrest device should be used for performing work >23.6 in (600 mm) high using a portable ladder. The ladder should extend >39.4 in (1000 mm) beyond the upper most edge of the access point

  ‘Footers’ should only be used if it is not practical to secure the ladder

# Scaffold

## Definition

This is the guideline for the technical specifications and selection of scaffolding for working at height

## Guideline

### Scaffolding

For heights >70.87 in (1800 mm) for permanent/semi-permanent work surfaces, a guardrail or similar device 2 be fitted. The rail should provide an upper rail of >35.43 in (900 mm), mid-rail and toe board 5.91 in (150 mm) above the work surface. The guardrail should be capable of resisting 0.445KN of force at any one point

Ladder fitted for any mobile scaffolding >6.56 ft (2 m) high.

Edge protection installed to open sides of ends of platforms >6.56 ft (2 m) high

The minimum duties and ratings of scaffolding should be:

|  |  |  |
| --- | --- | --- |
|  | **Design Total Load** | **Minimum width of platform** |
| **Heavy Duty**  | 1488 lb (675 kg) (6.5kN) | 17.72 in (450 mm) |
| **Medium Duty** | 992 lb (450 kg) (4.4kN) | 35.43 in (900 mm) |
| **Light Duty** | 496 lb (225 kg) (2.2kN) | 39.37 in (1000 mm) |

The height of tower scaffolding should not be more than three times the minimum base dimension unless otherwise specified by the manufacturer. Alternative base to height ratios or additional support is required if the scaffold is:

  Sheeted or exposed to strong winds

  Loaded with heavy equipment or materials

  Used to hoist heavy materials or support rubbish chutes

  Used for work requiring heavy or awkward equipment and/or

  Supporting a ladder

Mobile scaffolds require:

  Internal ladder with protected opening for access to and egress from the scaffold

  Castors to display working load limits

  Incorporate plan bracing to at the base to provide greater stability; and

  Fully functioning brakes

The mobility of mobile scaffolding presents a raft of hazards associated with the maneuverability of the unit. Therefore, prior to maneuvering scaffolding, users should confirm that:

  The area is free from overhead power lines and obstacles;

  The ground is stable and firm

  No persons are using the scaffolding

  Unstable equipment is removed from the platform

  Potential entanglements are removed including extension power leads



Guardrails or edge protection should be >35.43 in (900 mm) higher than working platform, yet not higher than 43.3 in (1100 mm) and designed to withstand a force of 0.55kN (55kg).

Toe boards of >5.91 in (150 mm) high or bottom rails of 5.91-7.87 in (150-200 mm) high should be installed.

Mid rails should be installed <17.72 in (450 mm) spacing to toe boards or guard rails.

Should the slope of the work surface be >260o sturdy mesh, sheeting or other suitable material should extend >35.43 in (900 mm) high from the base of the edge protection or toe board.

Fall arrest platform should conform to the following:

  Where work platform slope is <260o the fall arrest platform should be <3.28 ft (1 m) below the work surface or

  If the work platform is >260o, the fall arrest platform should be <11.81 in (300 mm) below the work surface

  Provide unobstructed landing area >26.57 in (675 mm) wide

  Where there is a gap of >8.86 in (225 mm) to the building/structure, control measures should be employed to prevent fall

### Perimeter containment screening

>0.1 in (2.5 mm) diameter steel with tensile strength >380Mpa



# Safety of Ladders and Scaffolds

## Definition

This is the guideline for safety of ladders and scaffolds

## Guideline

### Ladder safety

Using ladders (including stepladders) within the hotel may create a hazard to staff and customers. Staff should be aware of the associated hazards and ensure that they carry out the work safely using ladders correctly.

Regardless of the materials used, for example, wood or aluminum, all ladders should be constructed and maintained to meet the requirements of the local regulatory agency and be marked accordingly, or a record kept of compliance.

Ensure that the following instructions are understood and carried out by all personnel, whether visiting workmen, casual staff or fulltime staff. The hotel should retain a record of the information and training given to all personnel using ladders.

  When choosing a ladder, it should be strong enough for the job

  All ladders should be sound and free from defects. Their safe condition should be checked every six months and that check recorded, detailing the date and time and condition of the ladder. Number the ladder to aid identification and checking. If a defect is identified, the ladder should be withdrawn from service immediately. A notice should be attached to the ladder saying that it is dangerous to use and if beyond further use, the ladder should be cut up

  Carry out a check of the ladder before every use to ensure it is in good condition; no rungs are cracked or missing. The rungs should be kept clean at all times. Oil, grease, mud or water on the rungs are open invitations for loss of control

  Do not use a makeshift or home-made ladder or carry out ad hoc repairs

  When placing the ladder, rest it on a firm, level surface. Do not place it on material to gain extra height. Ladders should extend at least 1m above the alighting place unless there is a suitable handhold to provide support

  Angle the ladder so that the bottom will not slip outwards. The angle of incline should not exceed one in four

  Rest the ladder against a solid surface. Equipment such as ladder stays can be used to spread the load if the surface is brittle

  Ladders used for access or as a place of work should be secured or footed

  Extending ladders need an overlap of at least three rungs

  Never paint ladders – this may hide defects. A transparent varnish or linseed oil can be applied. Ensure that the ladder is thoroughly dry before it is used again

  Do not carry heavy items or long lengths of material up ladders. Carry light tools in a shoulder bag or holster attached to a belt so that you have both hands free to hold the ladder

  Overreaching is dangerous and should be prohibited

  Stepladders can be easily overturned. Do not use the top of a stepladder to work from unless it has specially designed handholds. Do not overreach

  Injury may not only be caused to the user of the ladder, but to other people who are in close proxim­ity to the working area. Whenever a ladder is used in close proximity to pedestrians or vehicles, a suitable barrier should be erected at the base of the ladder, to ensure that pedestrians or vehicles cannot strike the ladder. In the case of a ladder being used above a pavement, or in very close proximity to a road, then the local authority should be approached to erect/advise upon the use of a suitable protective barrier

  Ladders should not be used for working at heights above 29.53 feet (9 meters). Where working on a ladder above 9.84 feet (3 meters), the ladder should be lashed or footed. Top lashing is effected by securing the ladder to externally fixed eyebolts. The easiest method is to use quick release ladder ties. A ladder should be 'footed' by ensuring that its base is secured to cleats fixed to the floor, sandbags or stakes embedded in the ground. To have a second person at the foot of the ladder is not an advis­able alternative to securing, but it is ideal to prevent the foot of the ladder from slipping or being knocked into by pedestrians or vehicles.

  Ladders should be stored under cover horizontally or vertically in ladder racks. Do not hang a ladder by its stiles. The ladder should be placed on the rack to prevent distortion.

  The Maintenance Manager is responsible for ensuring that all ladders are checked regularly and that a record of the checks is kept.

### Scaffolding

  Scaffolding is used by practically everyone in construction at some time or other. It can be erected quickly to provide a safe place for anyone having to work at heights. However, each year many scaffolds collapse due to overloading or instability and numerous workers fall due to inadequate edge protection or defective working platforms. It is therefore necessary to ensure that all persons erecting scaffolding on the hotel premises understand this guidance note

  Staff should only be authorized to use this equipment if they have received training and have been assessed. This training should be recorded on the staff training record

  The information in this guideline should be communicated to the contractor or employee erecting the scaffolding

#### Erecting scaffolding

  The manufacturer of the scaffolding should provide an adequate instruction manual or erection guide for the type of scaffolding being erected. The supplier or hirer of the scaffolding should pass this on to the eventual erector/user of the scaffolding, who should make sure that it is available on site and that its instructions are closely followed

  Scaffolding with no accompanying instructions should not be used and should be returned to the supplier or disposed of

  The manufacturer's instructions will state the maximum height of the scaffolding or for free-standing scaffolding towers, the maximum height related to the square area of the base

  Aluminum alloy scaffolding towers are extremely light. They should remain stable and care should be taken that the scaffolding towers do not blow over when left unattended. The scaffolding tower should therefore be suitably braced and firmly connected to the building

  When the scaffold is protected by sheeting, or it is likely to be exposed to strong winds, the scaffolding tower should be rigidly connected to the structure it is serving. Scaffolding ties are also essential if the scaffolding tower is to be used for grit blasting, heavy drilling, water jetting or similar operations. Care should be taken if a scaffolding tower is to be used for lifting materials or equipment up the outside of the scaffolding tower. These operations are likely to force the scaffolding tower over if it is not securely connected to the building. It may be possible to use window-cleaning eyebolts, situated within hotel rooms, for securing the scaffold tower. Otherwise, ringbolt fixings should be fixed to the main structure and then connected to the scaffolding tower. Ten per cent of these ties should be subjected to a British Standard pull out test (or the equivalent in other countries)

  The scaffolding tower should rest on a firm base. Scaffolding towers should not be erected on recently made up ground, or on timber spanning excavations. When using a mobile tower, make sure the casters are locked

  All scaffolds require bracing. This will prevent collapse and stop the scaffolding tower swaying

  A clear area should be barricaded off, with actual barriers, 9.84 feet (3 meters) from the base of the scaffolding. This 'no go area' should be monitored and kept free of people and vehicles to prevent injury or damage

#### Access to the scaffolding tower

The scaffolding tower should have its means of access on the narrowest side of the tower. The tower should not be climbed on the external face. It should have a built in ladder with ladder rungs no more than 11.8 in (300 mm) apart. The styles of a ladder should not be more than 18.9 in (480 mm) apart. The ladders should be fixed firmly to the internal surfaces of the tower.

#### Guard rails and toe boards

Scaffolding from which a person could fall more than 6.6 feet (2 meters) should be fitted with guardrails and toe boards. The guardrail should be at a height of 1 meter above the platform and toe boards should extend from the working deck to a height of 5.9 in (150 mm).

#### The working platform

The platform of a general-purpose scaffold should be at least 4 scaffold boards wide. Platforms used for light work such as painting may be 3 boards wide. No materials are to be deposited on a working platform of just 3 boards. Work should never be undertaken from platforms that are not fully boarded.

#### Moving the tower

Before moving a mobile tower, check for power lines and obstructions or holes in the ground. Only push the tower from the base and never when people remain on the platform.

#### Protecting the public

A vertical protection on the scaffolding tower should be used when there is a risk of materials falling. Never throw materials from the scaffold. Always use mechanical hoists or rubbish chutes to dispose of the materials.

#### Unattended scaffolds

Whenever scaffolds are left unattended it is essential to prevent unauthorized access by removing all ladders at ground level and where necessary by erecting hoardings around the base.

#### Handing over an erected scaffold

  The scaffold should be inspected before use by a 'competent person'; that is, the most senior person on site from the scaffolding company

  The scaffold should not be used until the competent person has signed the hand-over certificate and this has been jointly signed by the designated InterContinental Hotels Group employee or their agent. Both parties should agree that the scaffold has been erected in accordance with this arrangement

  The scaffold tower should be inspected at least once a week to make sure that it remains fit for use and the hand-over certificate properly dated with the inspection dates and signed by the person carrying out the inspection. Again, the 'competent person' from the scaffolding company should carry out that inspection

#### Scaffolds on public highways

Before erecting a scaffold on a public highway, the appropriate highway authority should be contacted and permission obtained.