

Sample Lesson Plan
Construction Training Program (10-hour)
Stairways and Ladders

Introduction

OSHA rules cover all stairways and ladders used in:

- Construction
- Alterations
- Repair (including painting and decorating)
- Demolition

These rules do not apply to general purpose manufactured portable ladders.

Instructor's Activities

1. PowerPoint presentation.
2. Discuss 29 CFR 1926 Subpart X
3. Participant discussion

Learning Objectives and Outcomes

I. Hazards present when using stairs or ladders

- A. Trips
- B. Slips
- C. Falls

II. Stair guidelines or requirements to reduce or eliminate hazards

- A. Install handrails on stairs of four or more steps, and stairrails when there is a fall of more than six feet
- B. Handrails should be at least 3" from the wall or other object and be able to withstand 200 pounds at the top.
- C. Angle of the stairs should be between 30 and 50 degrees
- D. Stairs should have uniform riser height and tread depth of less than 1/4"
- E. Stairway landings must be 30" deep and 22" wide at every 12' or less of vertical rise
- F. When doors or gates open directly on a stairway, provide a platform that extends at least 20" beyond the swing of the gate
- G. Eliminate slippery conditions
- H. Ensure stairway parts are free of projections that may cause injury or snag clothing

III. Safety practices or guidelines to reduce or eliminate hazards when ladders are in use at a construction site

- A. Keep the area around the top and bottom of the ladder clear.
- B. Ensure rungs, cleats and steps are level and uniformly spaced.
- C. Keep ladders free from slipping hazards.
- D. Use ladders for the purpose for which they were designed.
- E. Don't load ladders beyond their maximum intended load.
- F. Secure ladders to prevent accidental movement, use on level surfaces, and barricade to keep traffic away
- G. Be sure ladders are used at the correct angle.
- H. Ensure the side rails of ladder extensions are at least 3' above the upper landing surface.
- I. When ladders are in use around energized electrical equipment, ensure side rails are wood or fiberglass.

References

OSHA Standard: 29 CFR 1926 Subpart X (1926.1050 to 1926.1060)

OSHA Publications

www.osha-slc.gov/OshDoc/Additional.html

- 3124 Stairways and Ladders

OSHA References/Resources

- Construction Safety and Health Outreach Program - Stairways and Ladders
www.osha-slc.gov/doc/outreachtraining/htmlfiles/stairlad.html
- OSHA Construction eCAT - Misuse of Portable Ladders
www.osha.gov/SLTC/etools/construction/falls/ladders.html
- OSHA Construction eCAT - Portable Ladder Safety
www.osha.gov/SLTC/etools/construction/falls/4ladders.html
- OSHA Technical Links - Construction: Walking/Working Surfaces
www.osha-slc.gov/SLTC/constructionwalking/index.html
- Overview for Subpart X - Stairways and Ladders
www.osha-slc.gov/Publications/Const_Res_Man/1926sub-x-overview.html

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