



# INDIANA DEPARTMENT OF LABOR

## Portable Ladder Safety

# Portable Ladders

- Consistently in top 10 OSHA standards cited over all industries
- Over 3500 citations each year
- Nearly \$ 4.5 million in penalties
- Over 100,000 injuries each year related to ladders

# Most Common Causes of Ladder Accidents

- Wrong type of ladder used
- Ladder used improperly
- Ladder in poor condition or damaged

# Objectives

- Types of portable ladders and hazards associated with them
- Inspecting portable ladders
- Correct set up of portable ladders
- Safe practices when using portable ladders

# Portable ladder types

- Step ladders
- Extension ladders
- Single or straight ladders

# Step ladder

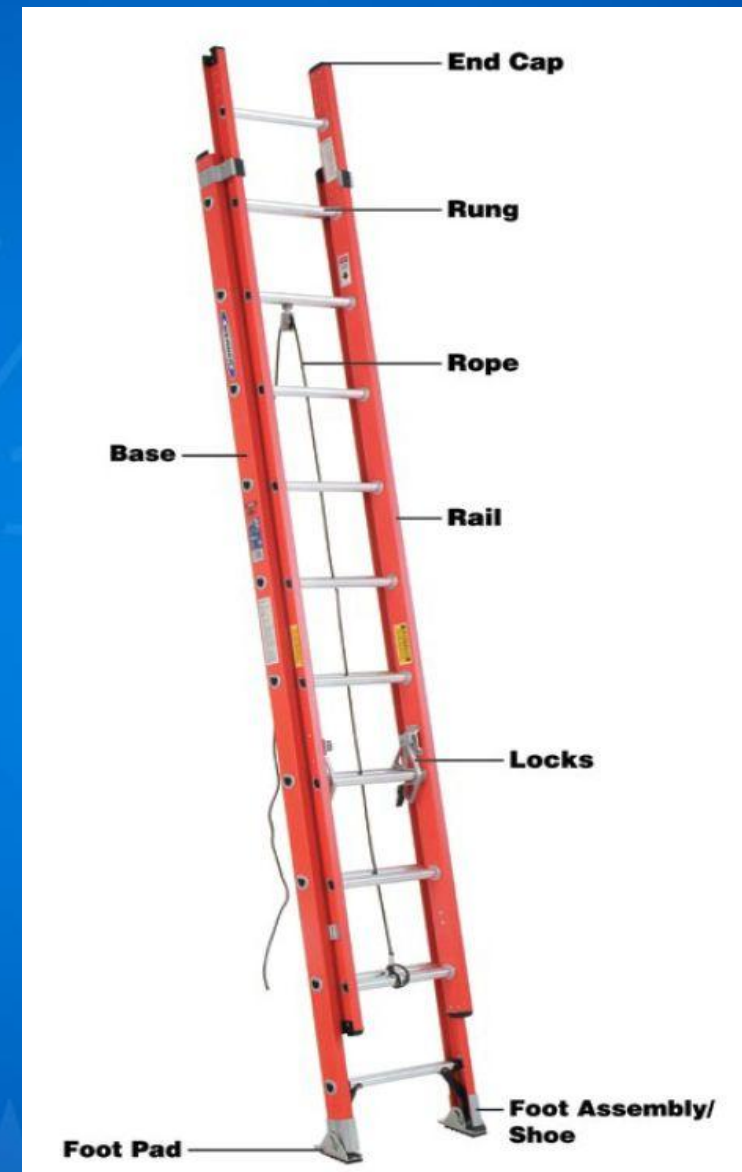
Manufactured in heights up to 20 feet.



# Extension ladder

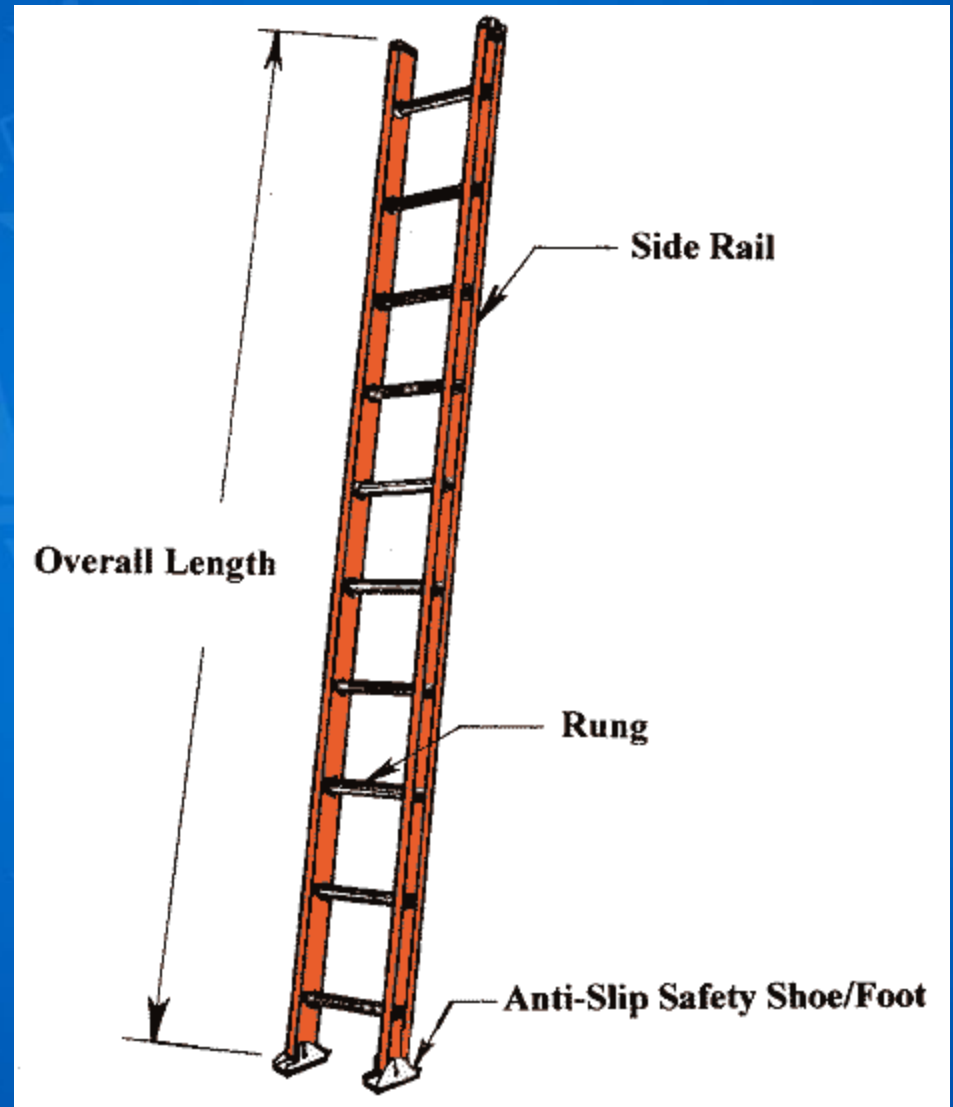
Can be up to 60 feet high but sections have to be overlapped

- overlap sections 3 feet for ladders up to 36 feet
- overlap must be 4 feet for ladders over 36 feet up to 48 feet
- overlap sections 5 feet for ladders over 48 feet up to 60 feet



# Straight ladder

Limit of 30 feet high





# Factors to consider when choosing a ladder

- Environment
- Length
- Purpose
- Duty Rating



# Working Load

Duty Rating	Ladder Type	Pounds
Special Duty	I-AA	375
Extra Heavy Duty	I-A	300
Heavy Duty	I	250
Medium Duty	II	225
Light Duty	III	200



# Duty Ratings



## LADDER IDENTIFICATION LABELS

I.D. labels provide important information regarding each ladder's Model Number, Type, Duty Rating, Size, and Highest Standing Level.



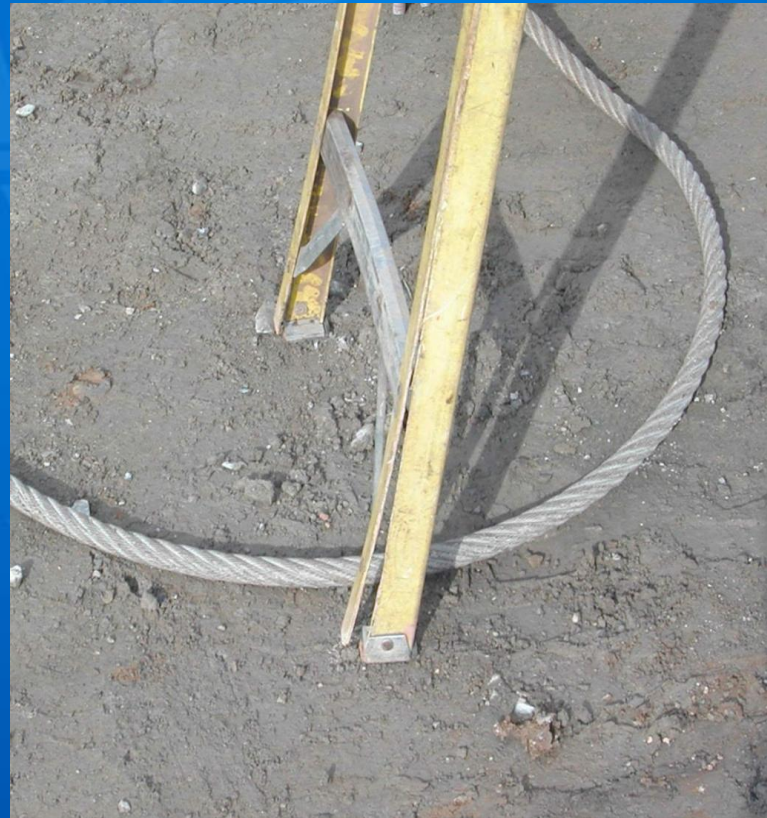
# Controlling Hazards

- Inspecting ladders
- Correct set up
- Safe use



# Ladder inspections – before each use check for:

- cracks, splits, broken or missing pieces, corrosion, other signs of wear



# Inspections

- slip resistant feet or pads



# Inspections

- bent parts and pieces



# Inspections

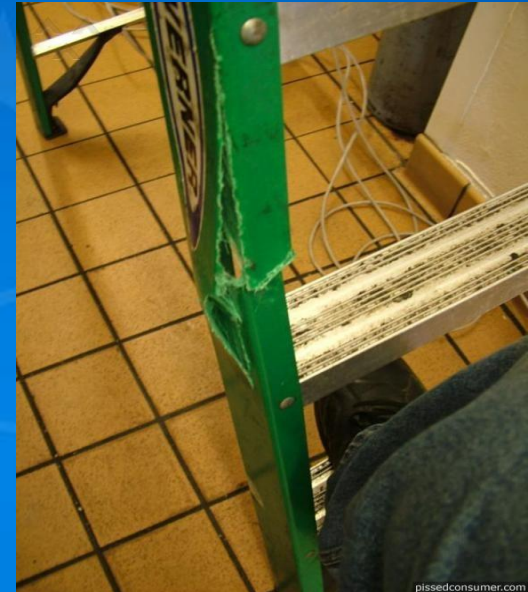
- missing rungs
- broken pieces





# Inspections

- damaged areas and parts



# Inspections

- Check for loose bolts and rivets
- Inspect braces, gussets, and spreaders
- Check rung locks and the rope and pulley on extension ladders
- Ensure label is present and check capacity
- Look for oil, grease and other slipping hazards on rungs and steps



# Ladder set-up

- Position in a safe location – avoid doorways
- Keep areas at top and bottom of ladder clear
- Ensure overlap on extension ladders is correct
- Never set up or take down an extension ladder while it is extended
- Erect extension ladders so bottom section faces the wall and upper section is in front
- Position near the work to avoid overreaching



# Ladder set-up

- Place on solid level surface and not on unstable objects



# Ladder set-up

- Extend side rails at least 36 inches above landing
- Secure or tie off extension ladders



# Ladder set-up

- Use the 4:1 rule for proper pitch - set base of extension ladder 1 foot away from wall or support for every 4 foot of vertical height or at a 75 degree angle

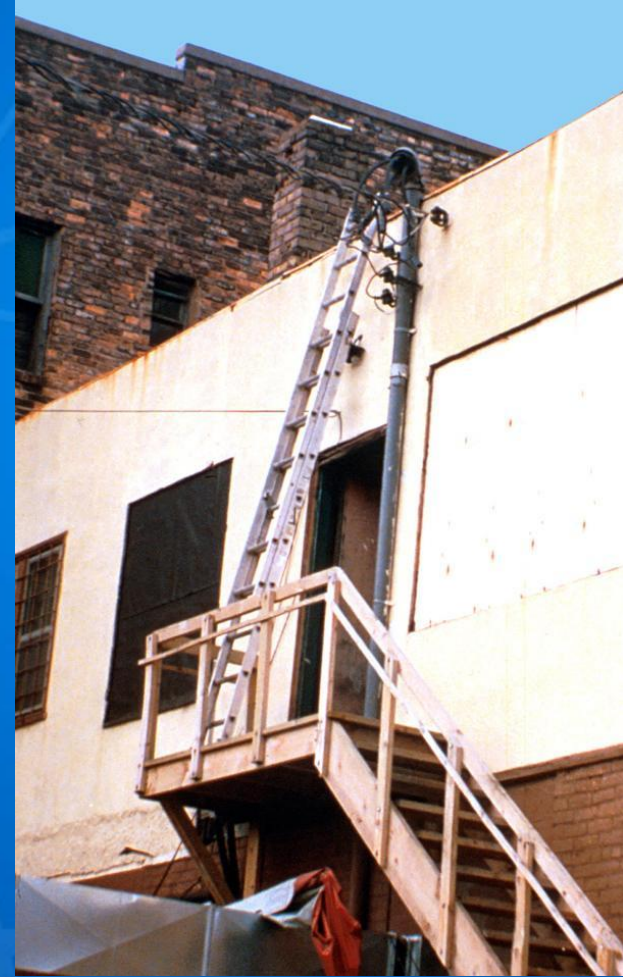
## Guide:

- stand with feet at base of ladder
- extend arms straight out
- hands should touch ladder
- close to 4:1 pitch



# Ladder set-up

- Never set up near power lines



# Ladder Use

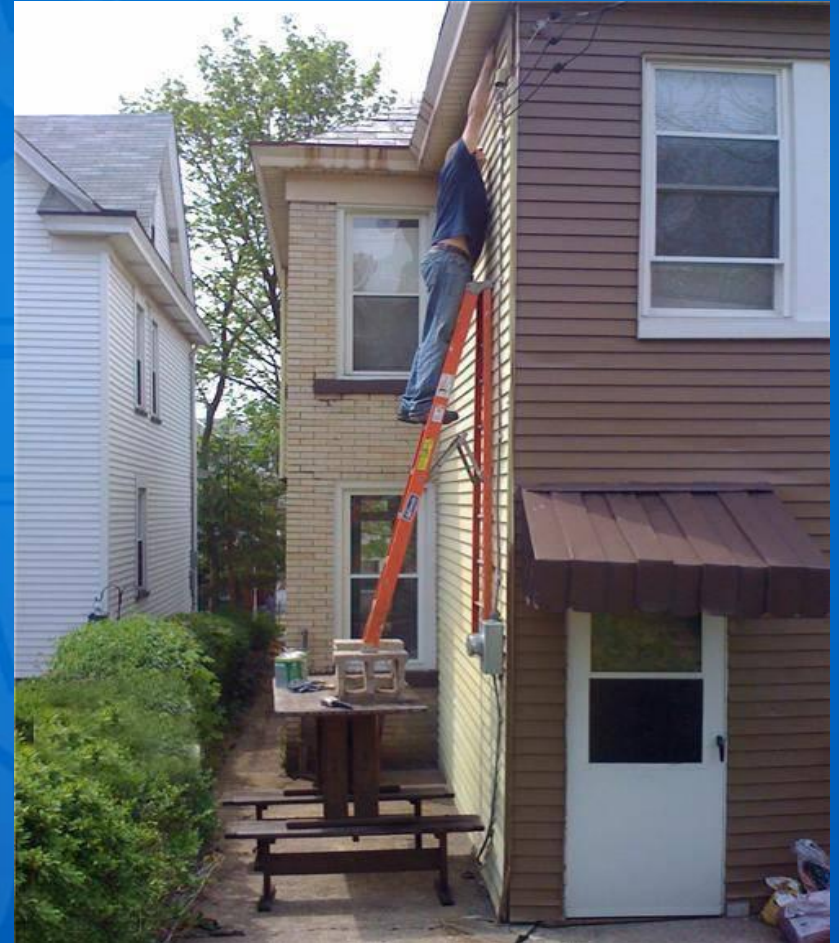
- Wear shoes with slip-resistant soles.
- Always have a 3-point contact when climbing a ladder (such as one hand and two feet).
- Never move, shift, or extend a ladder while on it.
- Do not exceed the ladders maximum load capacity
- Climb only the rungs or steps and never the bracing
- Don't leave tools or materials on the top cap of step ladders





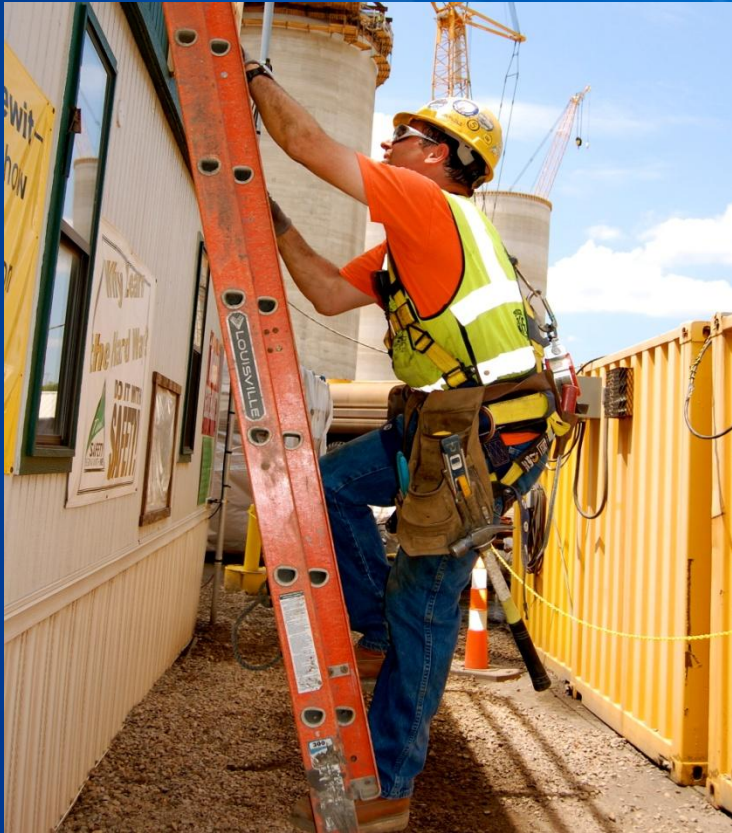
# Ladder Use

- Choose the correct ladder for the job



# Ladder Use

- Always face the ladder when climbing – never turn away from the rungs or steps



# Ladder Use

- Don't lean out or stretch while on a ladder
- Follow the “belt buckle” rule – keep body centered between side rails don't get belt buckle past side rails



# Ladder Use

- Never carry tools or other material in-hand while climbing a ladder



# Ladder Use

- Make sure legs are open and spreaders are locked
- Don't use or work from a step ladder in the folded position



# Ladder Use

- Only one person on a ladder at a time
- Never walk or work under a ladder



# Ladder Use

- Never work from the top or top step of a step ladder or from any of the top 3 steps of a straight or extension ladder.



# Ladder Use

- Never straddle a ladder.





# Summary

- Various types of portable ladders and hazards associated with them
- What to look for when inspecting portable ladders
- Correct ways to set up portable ladders
- Safe work practices when using portable ladders

# Indiana Department of Labor INSafe

To request a free safety or health  
consultation contact us at:

Phone: 317-232-2688

Fax: 317-233-3790

Website: <http://www.in.gov/dol/insafe.htm>

E-mail: [insafe@dol.in.gov](mailto:insafe@dol.in.gov)

