



Fall Protection

Susan Harwood Grant Training Program

Disclaimer/Usage Notes

- *Photos shown in this presentation may depict situations that are not in compliance with applicable OSHA requirements.*
- *It is not the intent of the content developers to provide compliance-based training in this presentation, the intent is more to address hazard awareness in the construction industry, and to recognize the overlapping hazards present in many construction workplaces.*
- *It should NOT be assumed that the suggestions, comments, or recommendations contained herein constitute a thorough review of the applicable standards, nor should discussion of “issues” or “concerns” be construed as a prioritization of hazards or possible controls. Where opinions (“best practices”) have been expressed, it is important to remember that safety issues in general and construction jobsites specifically will require a great deal of site- or hazard-specificity – a “one size fits all” approach is not recommended, nor will it likely be very effective.*
- *No representation is made as to the thoroughness of the presentation, nor to the exact methods of remediation to be taken. It is understood that site conditions vary constantly, and that the developers of this content cannot be held responsible for safety problems they did not address or could not anticipate, nor those which have been discussed herein or during physical presentation. It is the responsibility of the employer, its subcontractors, and its employees to comply with all pertinent rules and regulations in the jurisdiction in which they work. Copies of all OSHA regulations are available from your local OSHA office, and many pertinent regulations and supporting documents have been provided with this presentation in electronic or printed format. This presentation is intended to discuss Federal Regulations only - your individual State requirements may be more stringent.*
- *It is assumed that individuals using this presentation or content to augment their training programs will be “qualified” to do so, and that said presenters will be otherwise prepared to answer questions, solve problems, and discuss issues with their audiences.*
- *Areas of particular concern (or especially suited to discussion) have additionally been marked with a ? symbol throughout the program...as a presenter, you should be prepared to discuss all of the potential issues/concerns, or problems inherent in those photos particularly.*



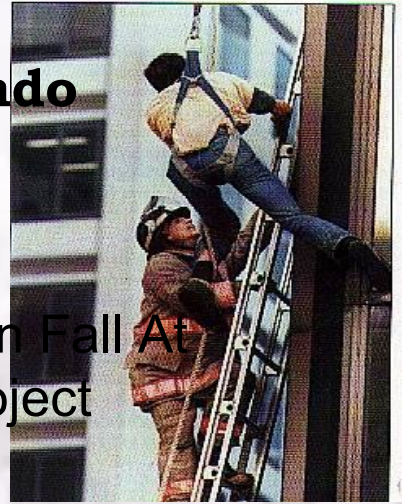
Introduction

Why Fall Protection?

Why Now?



Construction worker dies in fall from condo project



Worker Hurt In Fall At University Project

Bridge construction accident injures



Elementary school accident



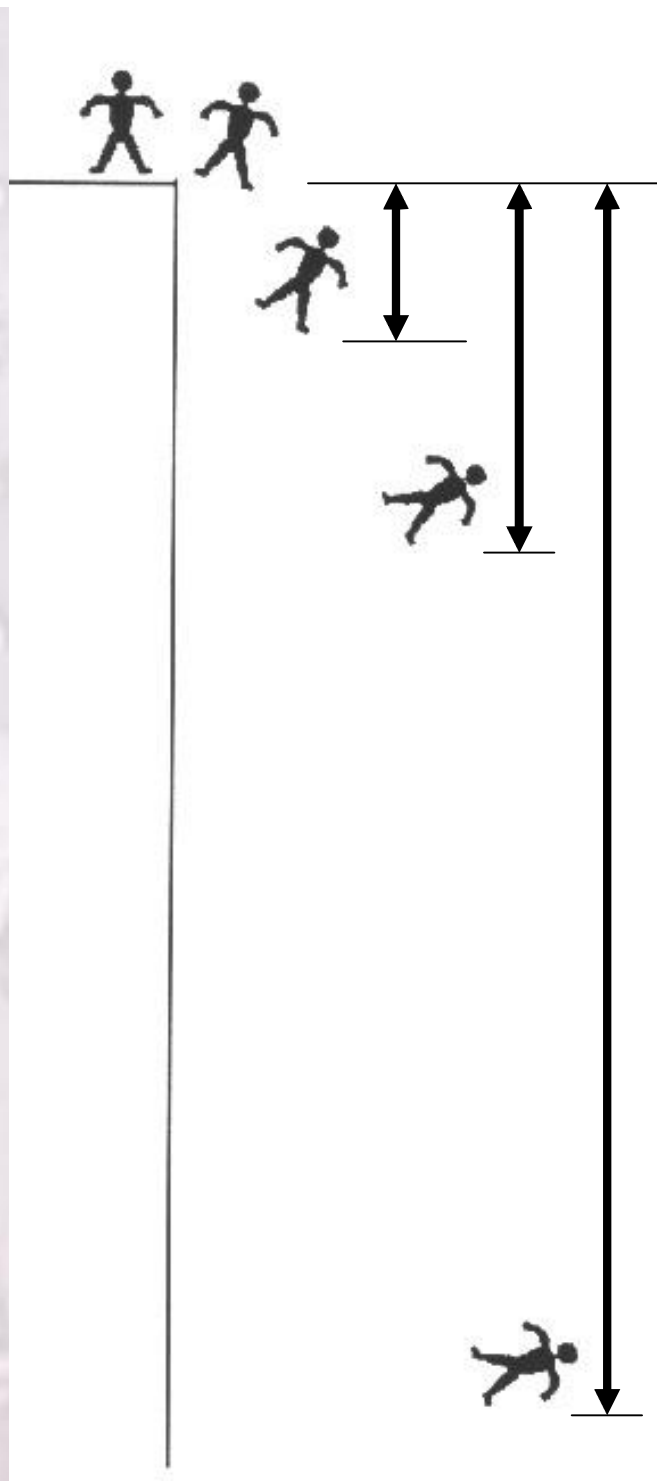
Worker in [unclear] floor fall



... fell had been on job only 3 weeks



These headlines are all from the third and fourth quarter of 2003



.33sec./2 feet

.67 sec./7 feet

1 sec./16 feet

2 sec./64 feet

Anatomy of a Fall

- It takes most people about 1/3 of a second to become aware.
- It takes another 1/3 of a second for the body to react.
- A body can fall up to 7 feet in 2/3 of a second.

Acceleration = 32 ft/sec^2
Deceleration = 0 ft/sec^2



An aerial, high-angle photograph of a construction site. The image shows a complex network of steel beams and concrete structures under development. A prominent crane arm extends diagonally across the upper left portion of the frame. The overall scene is a dense, geometric pattern of construction elements, rendered in a muted, light brown color palette.

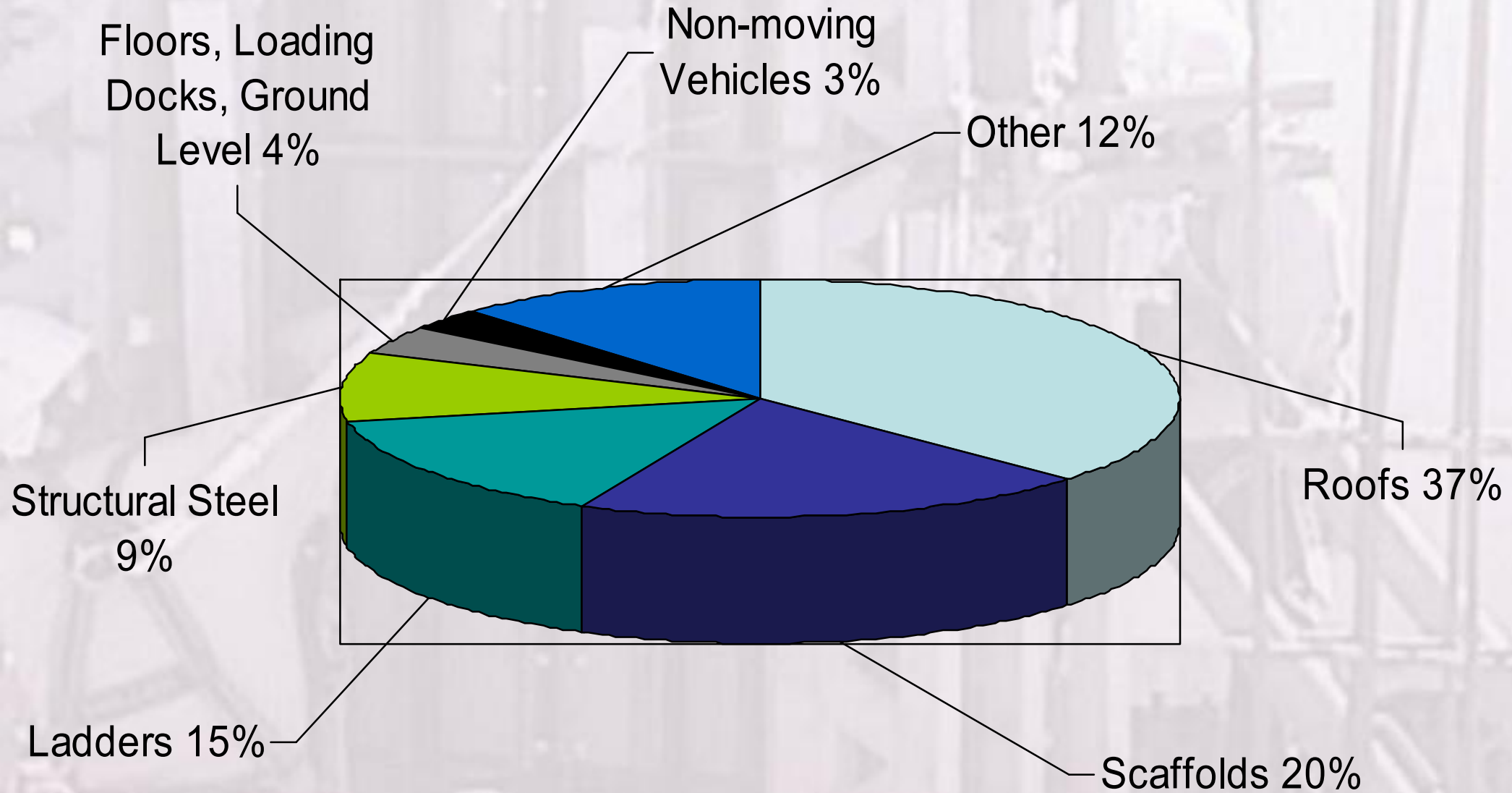
Statistics

How Can the Numbers Focus Our Efforts?

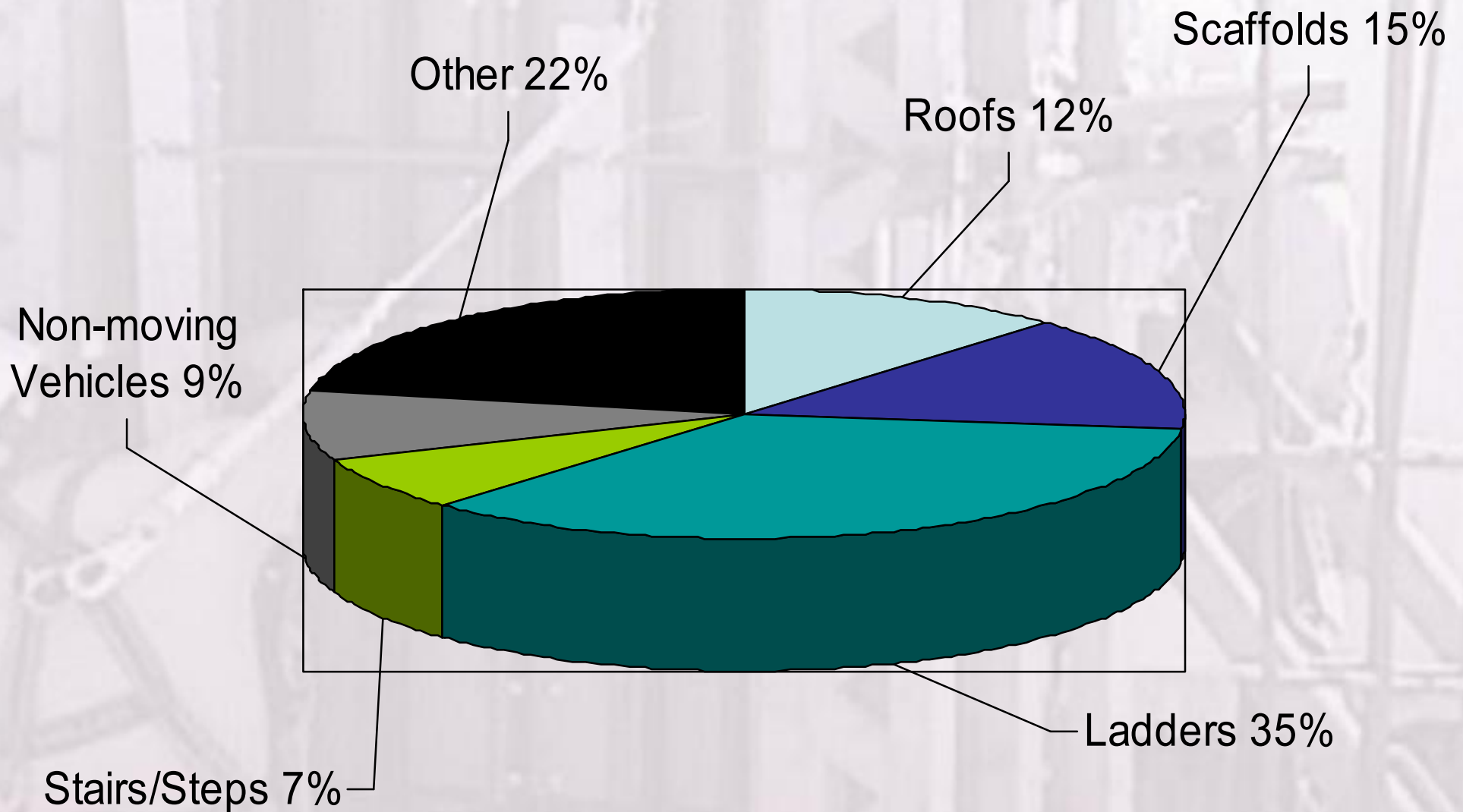
Falls

- **Falls** are the *leading cause of fatalities* in the construction industry.
- An average of *362 fatal falls occurred each year* from 1995 to 1999, with the trend on the increase.
- The cost of care for injuries related to falls is a financial burden for the entire construction industry

Fatal Falls Most Often From



Non-Fatal Falls Most Often From

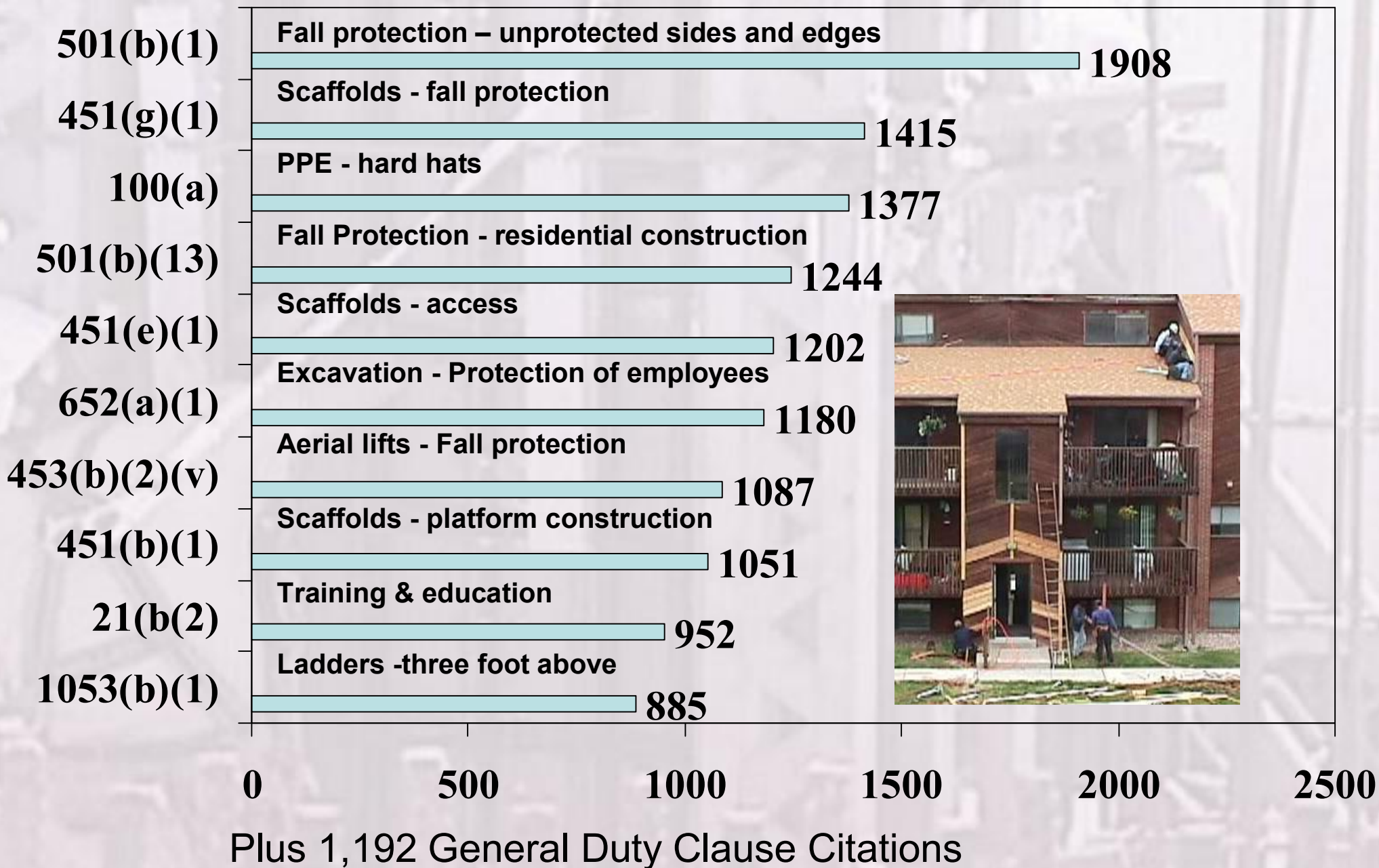




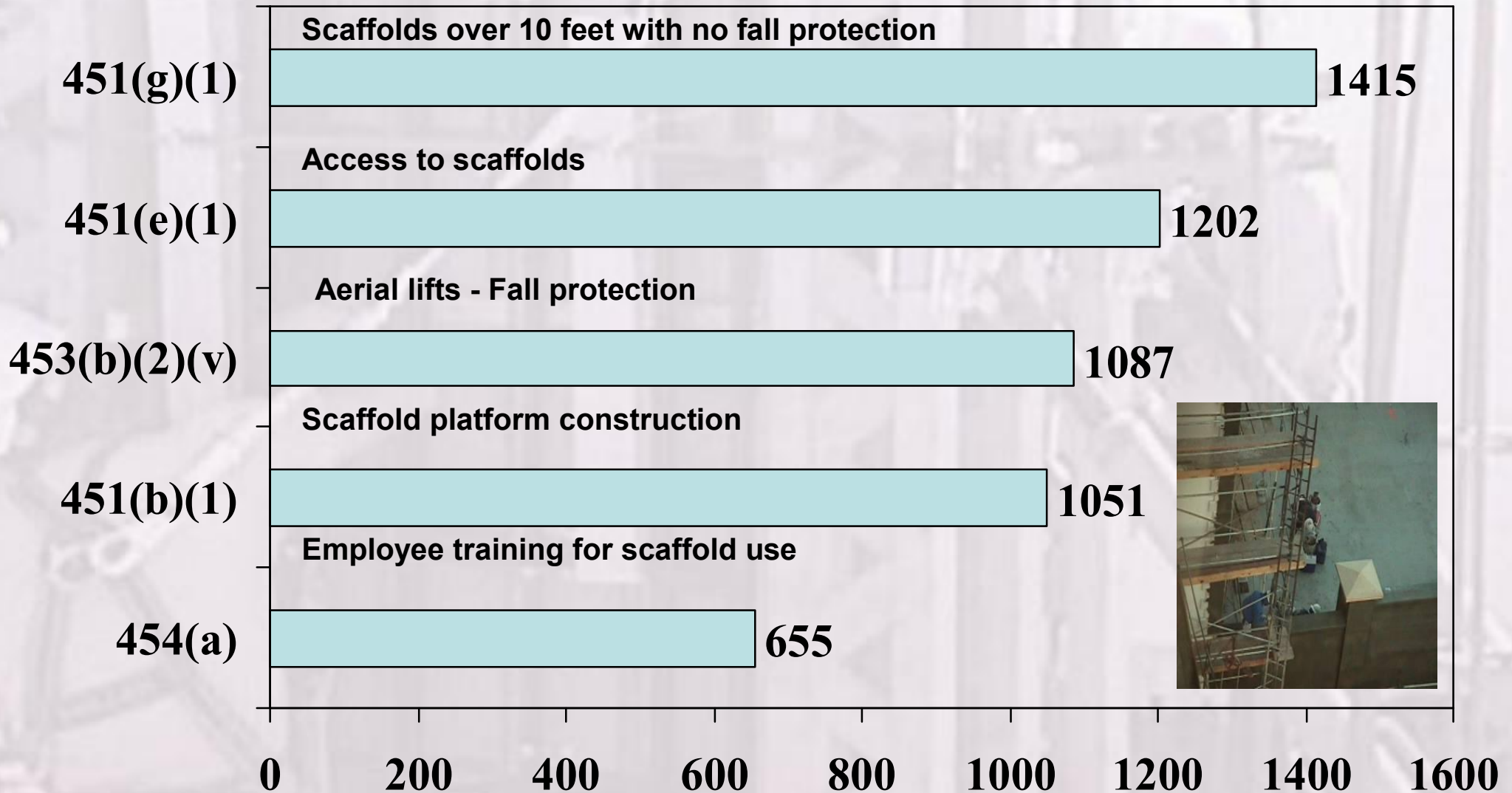
Citations

What is OSHA Focusing On?

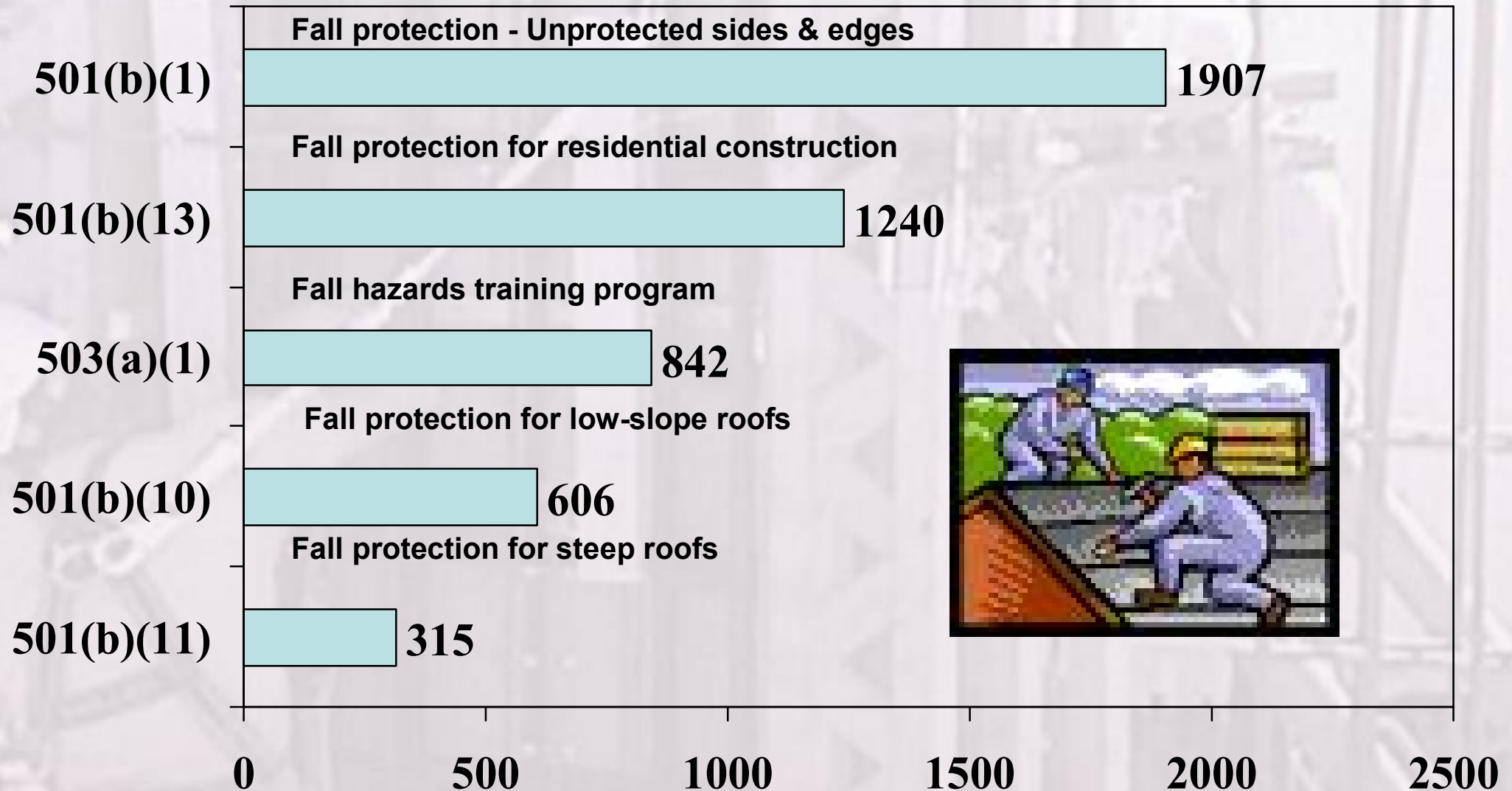
2003 Most Frequently Cited Construction Standards



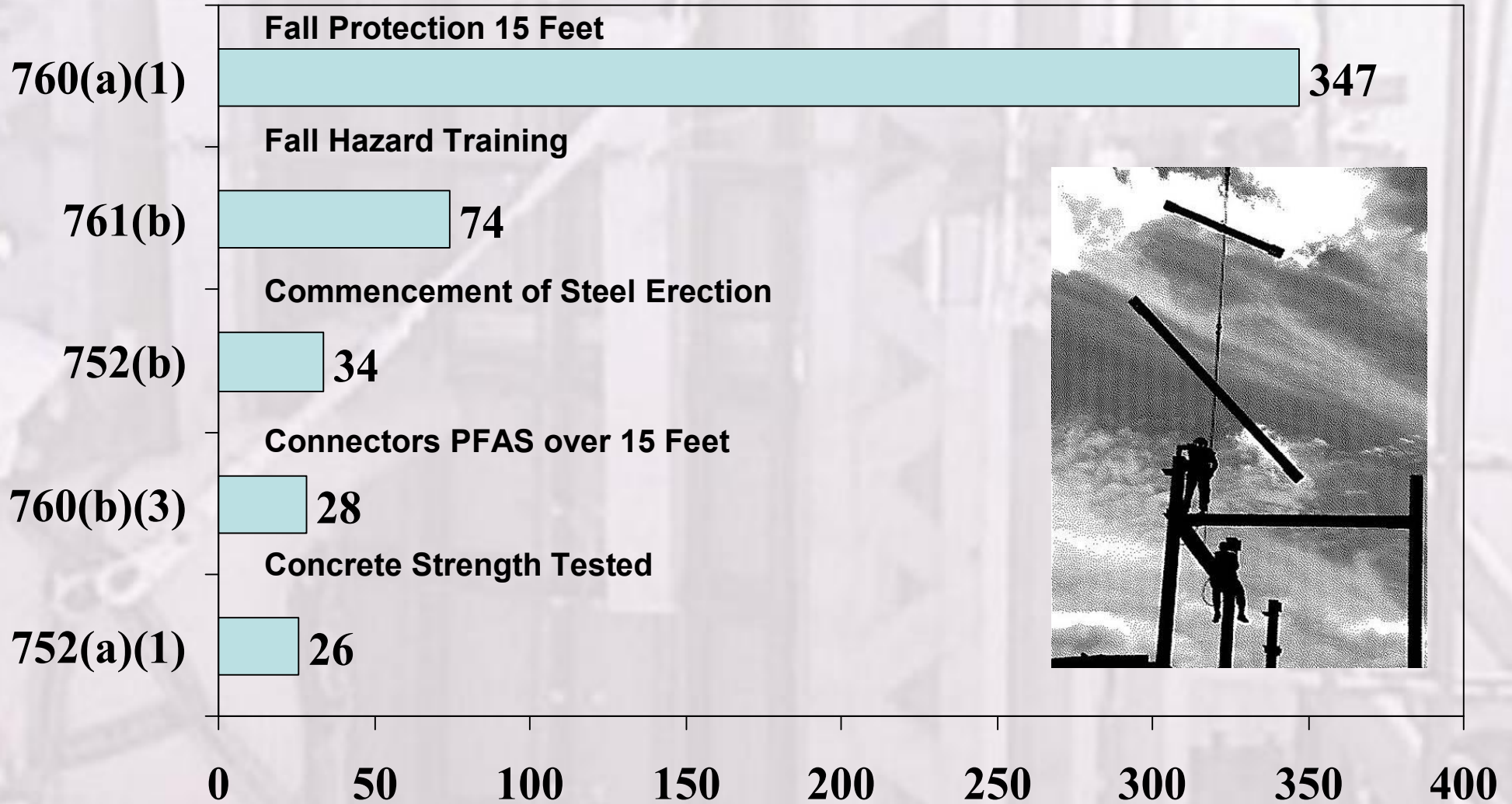
2003 Subpart L 1926.450-454 Scaffolds



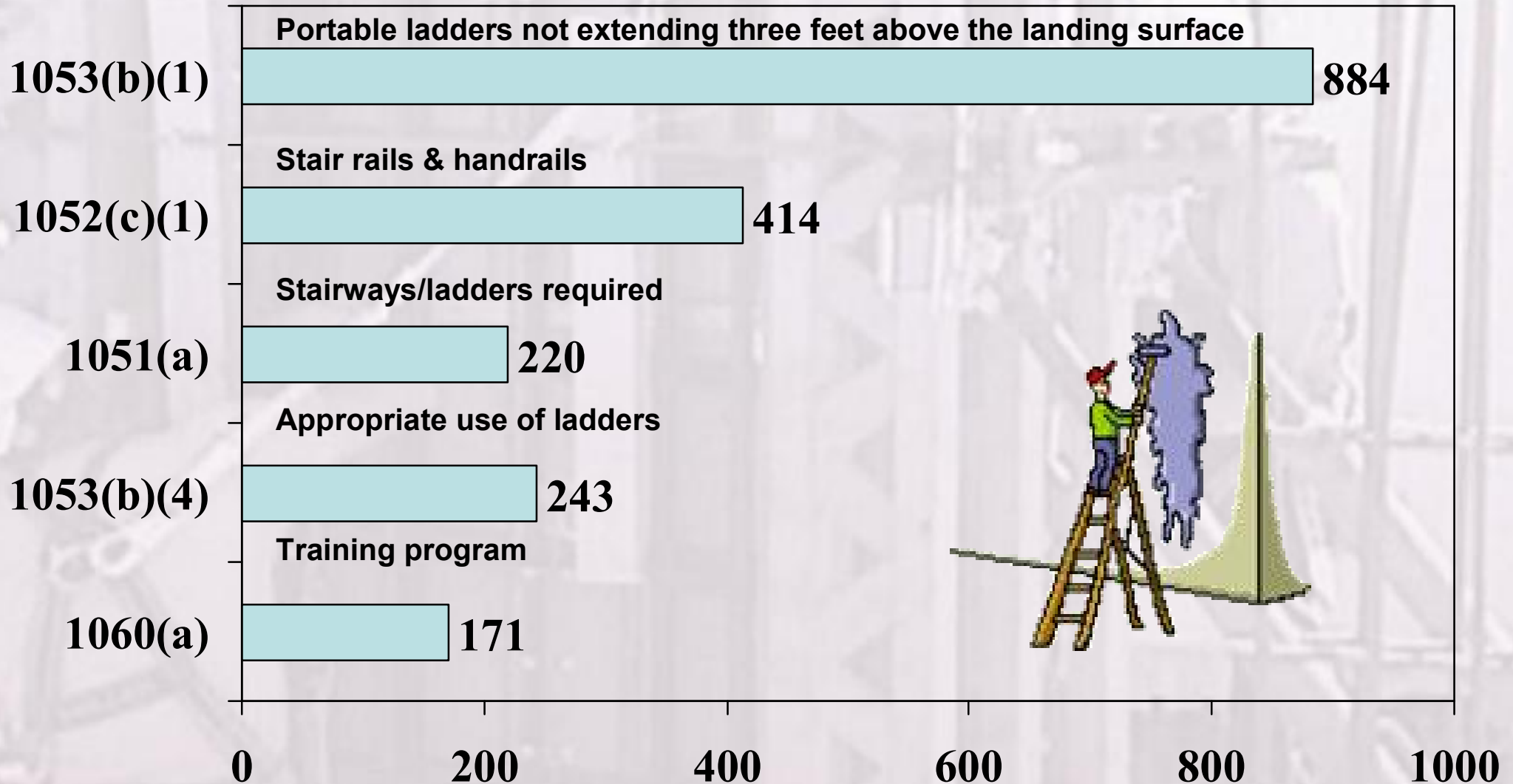
2003 Subpart M 1926.500-503 Fall Protection



2003 Subpart R 1926.750-761 Steel Erection



2003 Subpart X 1926.1050-1060 Ladders



2003 Most Frequently Cited Construction Standards

- **In Fiscal Year 2003, 50% of the top 25 OSHA Construction standards violated were *Fall Related*.**

What Is Fall Protection?

- **A series of reasonable steps taken to cause elimination or control of the injurious effects of an unintentional fall while accessing or working at height**

Philosophies of Fall Protection

Stop/Prevent The Fall



Restraint/Positioning

Guardrails

Warning Lines

Controlled Access Zones

Controlled Decking Zones

Safety Monitors

Catch The Fall



Fall Arrest

Safety Nets

Catch Platforms

Do these stop/prevent the fall?

Planning for Fall Protection

- Best practice dictates that fall protection becomes an integral part of the project planning process, from constructability, to systems installation, to use and maintenance
- A project cannot be truly safe unless fall protection is incorporated into every phase of the construction process
- Planning will keep workers safe and minimize liability for all parties involved

The Steps of Fall Protection?

Fall Arrest



1

Fall Prevention



2

Positioning



3

Retrieval



4

- **Is this the correct order?**

Controlling Fall Exposures

- Select fall protection systems appropriate for given situations.
- Use proper construction and installation of safety systems.
- Supervise employees properly.
- Use safe work procedures.
- Train workers in the proper selection, use, and maintenance of fall protection systems.
- Evaluate the effectiveness of all steps

Competent Person

- means one who is capable of identifying existing and predictable hazards in the the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Qualified Person

- means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter

An aerial, high-angle photograph of a construction site. The image shows a complex network of steel beams and concrete structures under development. A large crane is visible on the left side, extending its boom across the site. The overall scene is a dense grid of construction elements, with various levels and sections visible. The image is faded and serves as a background for the text.

By the Numbers

Some of the Applicable Triggers

Falls onto dangerous equipment

- 0' Allowable Fall Distance
- (You Must Be Protected)



Break in elevation without a step

- 19"



First step onto a scaffold system

- 2'



Work on forms or steel reinforcing

- 6'



Work on surfaces such as decks, non-residential roofs, ramps, etc

- 6'



Scaffold platforms without guardrails

- 10'



Vertical fixed ladders without cages, etc.

- 24'



Climbing steel reinforcing

- 24'



Steel erection work

- 15-30', or two stories, whichever is less



Roofs with pitches 8:12 or less in residential-type (wood frame) construction

- 25'



Falls into safety nets

- 30'



Height of scaffold ladders requiring rest platforms

- Over 35'



Falls from portable extension ladders

- No Limit



An aerial, high-angle photograph of a construction site. The image shows a complex network of steel beams and concrete structures under development. A large crane is visible on the left side, extending its boom across the site. The overall scene is a dense grid of construction elements, with various levels and sections visible. The image is faded and serves as a background for the text.

Which Standards Apply?

It's Not Just Subpart M!

Which Standards Apply?



Which Standards Apply?



Which Standards Apply?



Which Standards Apply?



Which Standards Apply?



Which Standards Apply?



Which Standards Apply?



Which Standards Apply?



Which Standards Apply?



Which Standards Apply?

