

Welcome!

Telecommunications  
Towers & Site Safety



ITSC: Wednesday September 14, 2005

# Site Safety

This presentation is intended to allow for an overview of the Site Safety concerns that we all should be aware of. Due to limited time some necessary areas may not be addressed.

# Stella Liebeck Awards

- Kathleen Robertson of Austin, Texas, was awarded \$780,000.00 by a jury of her peers after breaking her ankle. She broke her ankle after tripping over a toddler who was running inside a furniture store. The child was hers!

## Stella Awards cont.

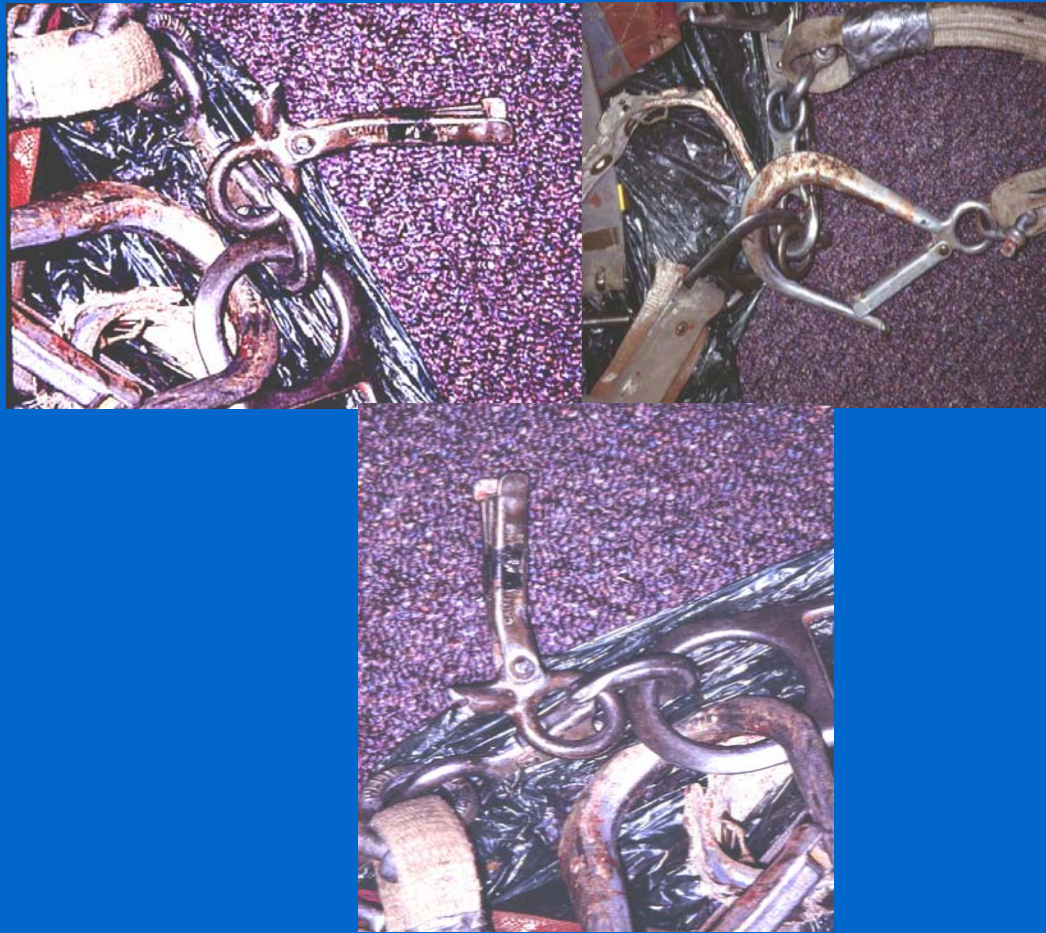
- Mr. Grazinski purchased a brand new 32 foot Winnebago motor home. On his first trip home, having driven onto the freeway, he set the cruise control at 70 mph and calmly left the driver's seat to go into the back and make himself a cup of coffee. Not surprisingly, the R.V. left the freeway, crashed and overturned. Mr. Grazinski sued Winnebago for not advising him in the owner's manual that he couldn't actually do this. The jury awarded him \$1,750,000.00 PLUS a new motor home.

# Safety

- No one wants to see someone hurt.
- Safety comes with a price
- At times the price is someone's life

# People Are Paying The Price

This contractor had been removed from the project earlier due to inability to perform, however when it came time to paint he was allowed to continue.



***Three Tower Painters Die After Falling 1,200 Feet When Riding the Hoist Line – North Carolina***

**SUMMARY**

A 40-year-old tower-painting-company owner, his 16-year-old stepson, and a 19-year-old employee died after falling 1,200 feet when the hoist line on a portable capstan hoist used to raise them up the side of a 1,500-foot-high radio tower began slipping around the capstan, causing the hoist operator to lose control of the hoist line. The company had been at the site for 2 weeks to repair the beacon light at the top of the tower, paint the tower, and install rest platforms



*Incident Site*

on the tower. On the day of the incident, the owner was going to work on the beacon light at the top of the tower while the two other workers were going to continue painting the tower. A 3,000-foot length of  $\frac{3}{4}$ -inch nylon rope and a 1,000- pound-capacity portable electric capstan hoist was used to raise the male workers up the outside of the tower. Three loops, which the workers utilized to assist them in riding the hoist line, were tied into the hoist line approximately 6 feet apart. The stepson was first on the line, then the 19-year-old, then the company owner. Using a length of woven rope, the male workers had attached one of the rest platforms to the end of the nylon rope 62 inches below the

**Fatality Assessment and Control Evaluation (FACE) Project**

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), performs Fatality Assessment and Control Evaluation (FACE) investigations when technical assistance is requested from participating states or the Wage and Hour Division, Department of Labor. The goal of these evaluations is to prevent fatal work injuries in the future by studying the working environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact.

# People Are Paying The Price

## **Alton Man Dies in Fall from Tower Near Harviell**

A man erecting a communications tower about 10 miles south of Poplar Bluff died when he fell approximately 80 feet Wednesday. Daniel Arnold, 38, of Alton, Ill., was taken by ambulance to Poplar Bluff Regional Medical Center...

## **Worker Dies in Fall from Tower**

**Lincoln (CNS)** - A 43-year-old Arizona man lost his life Monday after falling 120 feet from a partially dismantled tower in the 1900 block of Fifth Street Road. Lincoln firefighters were called to the scene at 11:03 a.m.

## **Tower accident victims were strengthening site for collocation.**

WASHINGTON--Officials say the three men who died after falling from an cell tower in Arkansas were attempting to strengthen the facility for collocation purposes as a condition of a pending \$658 million sale of nearly 2,200 towers to a Tower Corp., a structural modification that strongly appears to have involved federal safety violations.

The Occupational Safety and Health Administration and local law enforcement officials in Forrest City, Ark., are overseeing separate probes of the Jan. 2 accident.

## **Man falls to his death in Watonga**

WATONGA-A 27-year-old man died Tuesday after falling 240 feet from a cellular phone tower just south of town, authorities said.

The accident occurred near State Highway 33, Watonga Police Chief Gary Clyden Said.

# Snap Shot Of Our Industry

## 163 Deaths, 1992-2001

- Falls 129 (79%)
- Tower Collapse 19 (12%)
- Other 15 (9%)  
(Electrocution/Struck By)

Census of Fatal Occupational Injuries, Bureau of Labor Statistics

# Why People Are Paying Attention To Us?

Approximately 7,000 tower erectors\*

**170 deaths/100,000 tower workers**

**VS**

**5 deaths/100,000 workers-all other industries**

**RATE IS 30 TIMES HIGHER!!!!!!!!!!!!!!**

\*NATE

## Communication Tower Fall Fatalities

- 1999 15 OSHA Region IV had 6
- 2000 6 OSHA Region VI had 4
- 2001 14 OSHA Regions IV and VI had 5
- 2002 16 OSHA Region VI had 7
- 2003 9 OSHA Region IV had 5
- 2004 8 OSHA Regions IV and V had 3

# Areas That Are With In Our Control

- Who We Hire?
- What We Use?
- What We Know?
- What We Inspect?



# Who we hire?

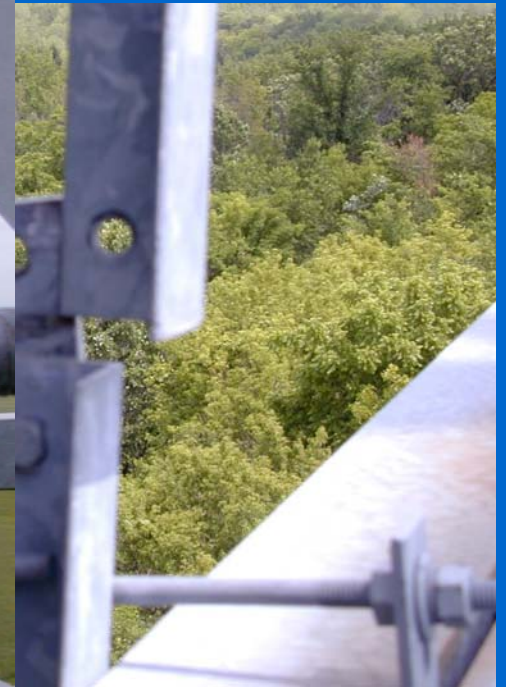
Where is the Tremie chute?

What about PPE?



# Who We Hire?

Struck by 9% of our fatalities



# What We Use/ Who We Hire?

Improper install



# Who We Hire/What We Use?

Kathleen Robertson tripped over her own son and sued and won \$780,000.00. What happens when we leave behind installs that damage the property of others or create another hazards?



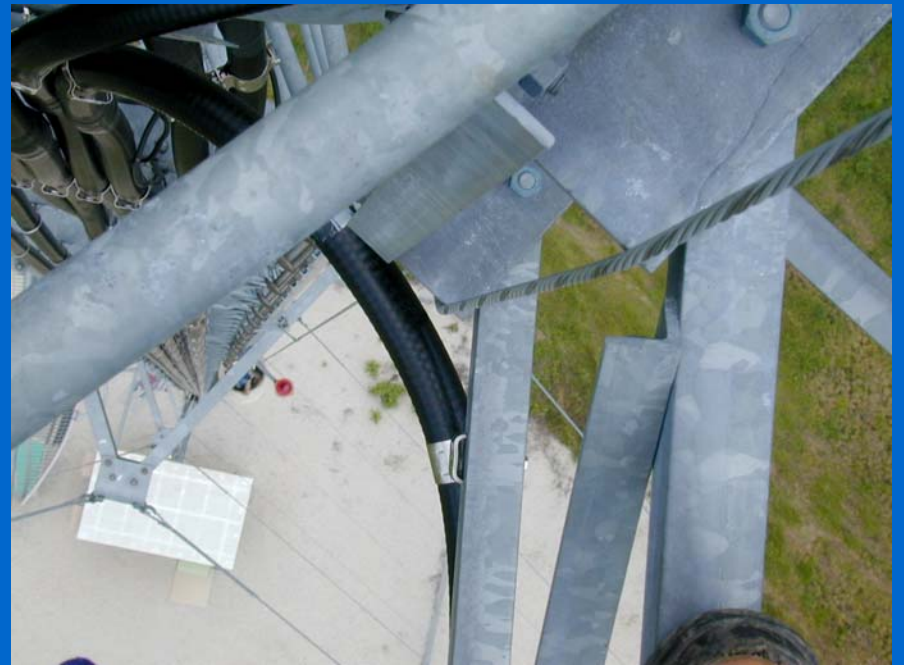
# What We Use?

Very difficult  
to inspect



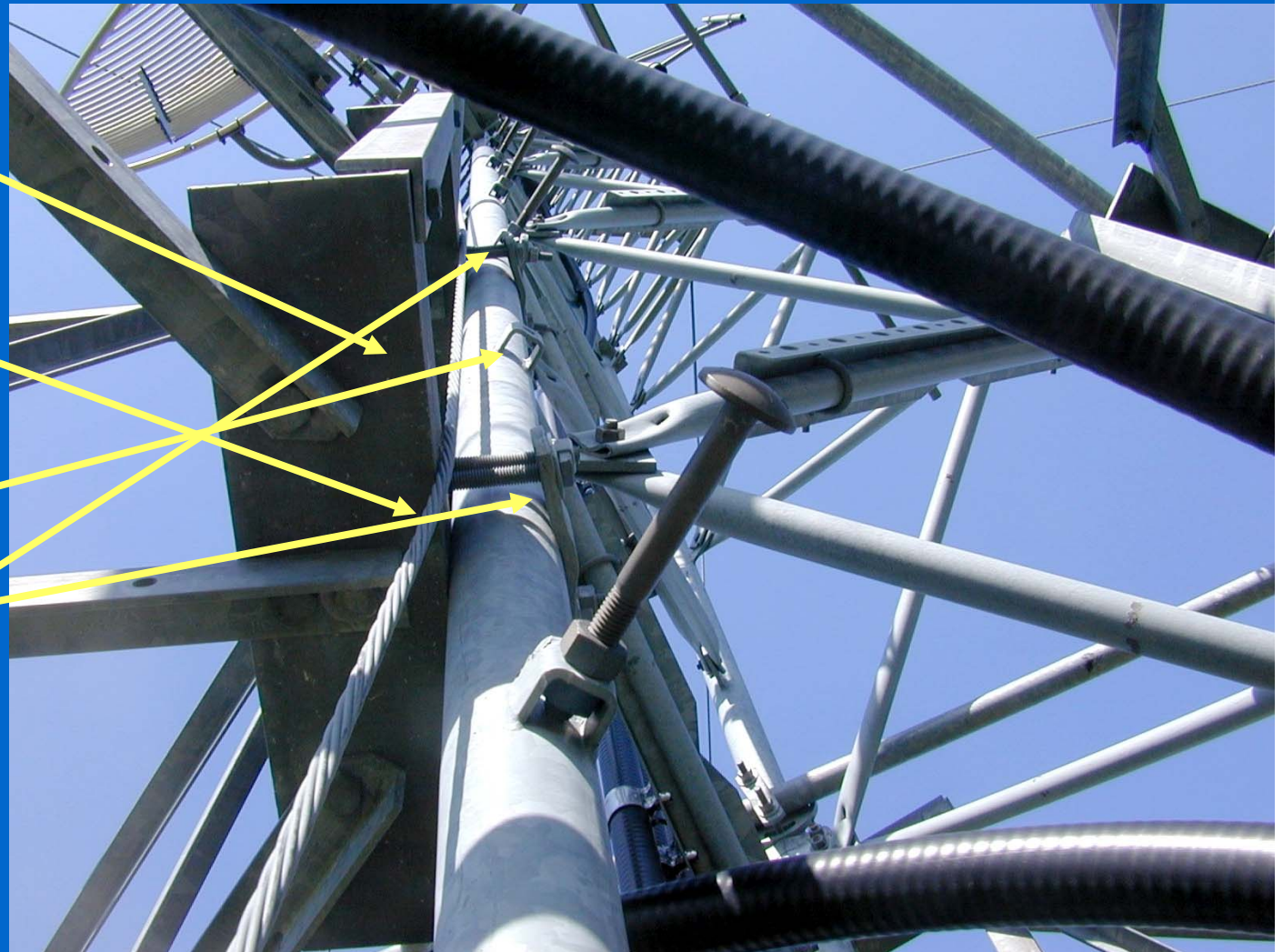
# What We Know?

Mounts installed to render safe climb  
useless or unsafe



# Safety Climb cont.

1. Obstruction
2. Improper tension applied to safe climb
3. Missing Step bolt
4. Improper hardware



# Who We Hire/ What We Know?

12% of the fatalities in this industry come from structural failure, most of them are due to improper initial install



# What We Know/ Inspect?

How do we inspect this?



More importantly why was the tower climbed with out Owner being informed



# RF Issues & Citations

- Carrier A had hired General Contractor B, who in turn hired a sub contractor who in turn hired another sub contractor who in turn hired another sub contractor to perform some maintenance/inspection work on the tower. The sub called the carrier's NOC and informed them he would be doing work on the tower and the NOC personnel did nothing to lock out the antennas at the tower.

# RF Issues & Citations

- The contractor was cited by OSHA for violations covering. For Fall protection, Hazard communication, Improper PPE, and Lack of Training.
- Carrier A was also cited under the Multi employer clause.

# RF Issues & Citations

- Citation against Carrier A was dropped because
  - a. Employee was not wearing his RF monitor which was required by Carrier A.
  - b. RF Monitor was out of calibration.
  - c. Abatement was agreed too.

# Recommendations From NIOSH

## Tower Owners should:

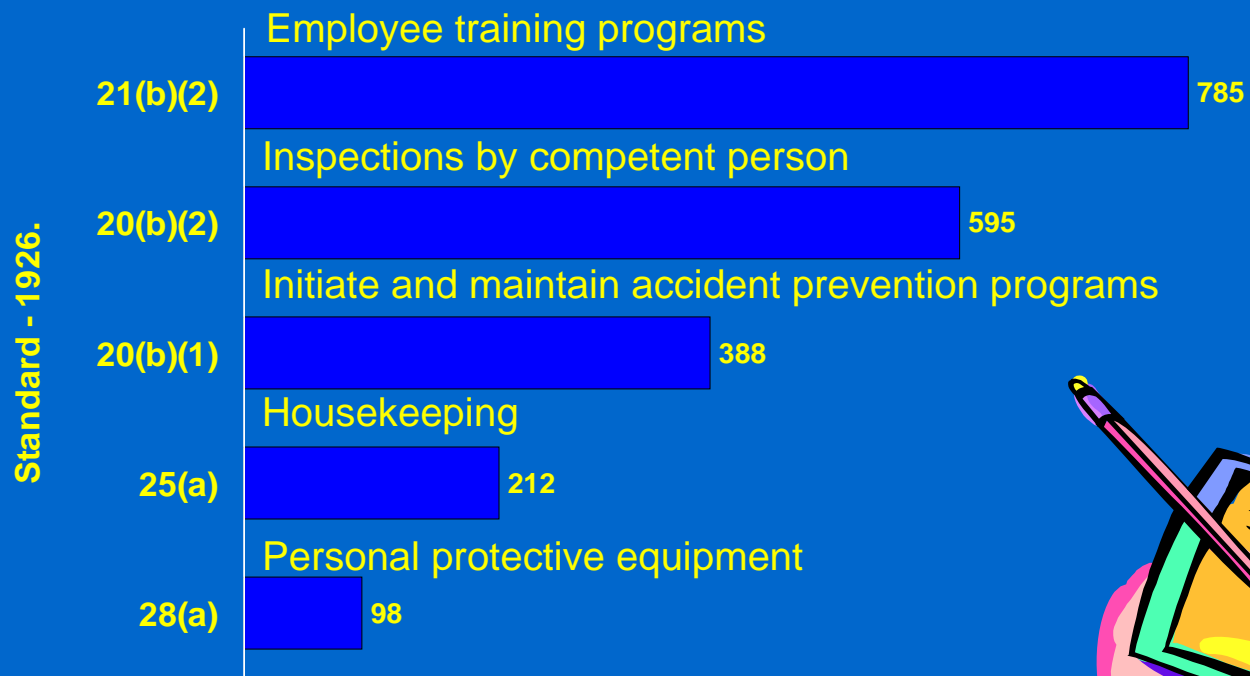
- **Ensure in contracts that workers adhere to OSHA Compliance Directive CPL 2-1.36 while performing construction or maintenance activities on their towers**
- **Specify that 100% fall protection must be utilized when working at heights greater than 25 feet**
  - **Require contractors to have a formalized safety and health program that specifically relates to tower construction and maintenance**
  - **Include in contracts a provision for frequent and regular inspections of the job site to be performed by a competent person who has expertise in tower erection and fall protection**

# Recommendations From NIOSH

## Manufacturers and Tower Owners Should:

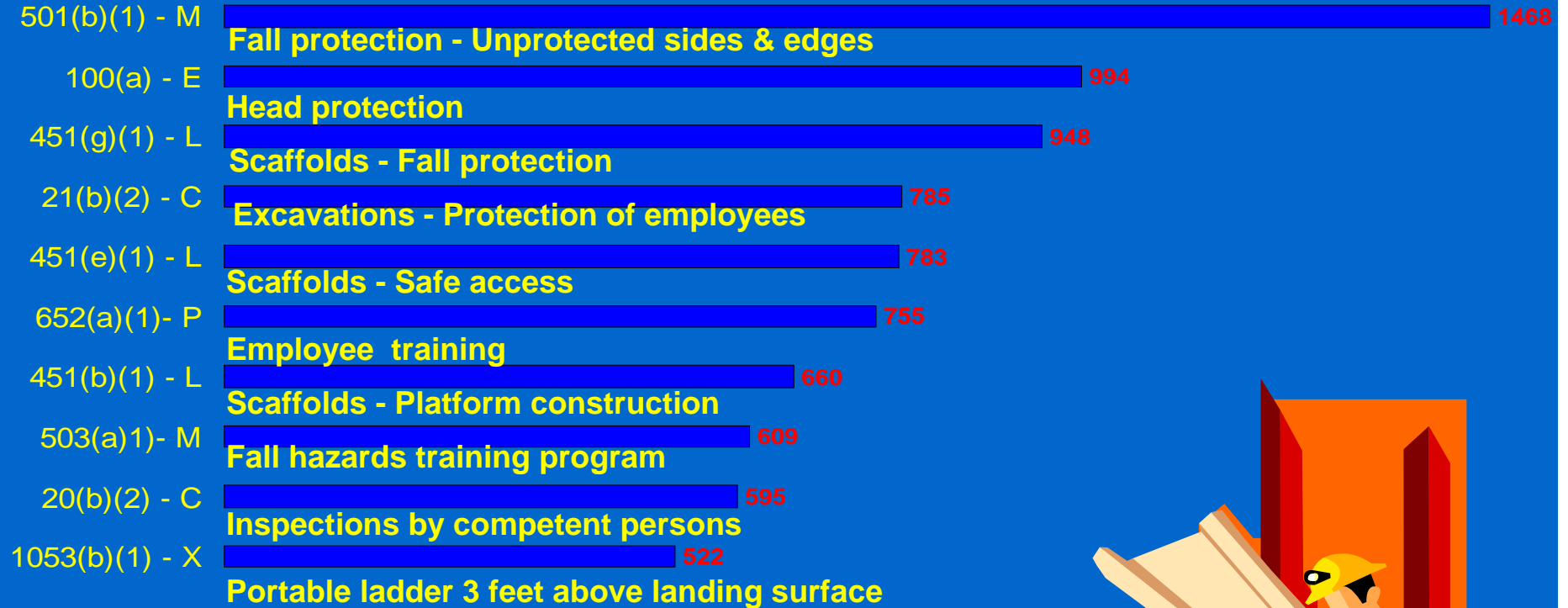
- Consider installing fall-protection fixtures on tower components during fabrication or erection that would facilitate the use of fall-protection systems

# Most Frequently Cited Subpart C - General Safety & Health (1926.20 - 35)



# Most Frequently Cited Serious Violations in Construction – FY03

Standard & Subpart - 1926.



# QUESTIONS?

