

TOP 5 WAYS TO REDUCE FALL HAZARD RISK

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THE VOICE OF THE INSULATION INDUSTRY™

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LEARNING OBJECTIVES

- **DESCRIBE** the recently published ANSI/ASSP Z359 standards
- **SUMMARIZE** how this will affect your equipment purchases
- **EXPLAIN** five ways to reduce fall hazard risk

AGENDA

- Background
- New ANSI/ASSP Z359 standards
 - Equipment considerations
- Top 5 Ways to Reduce Risk
- Closing

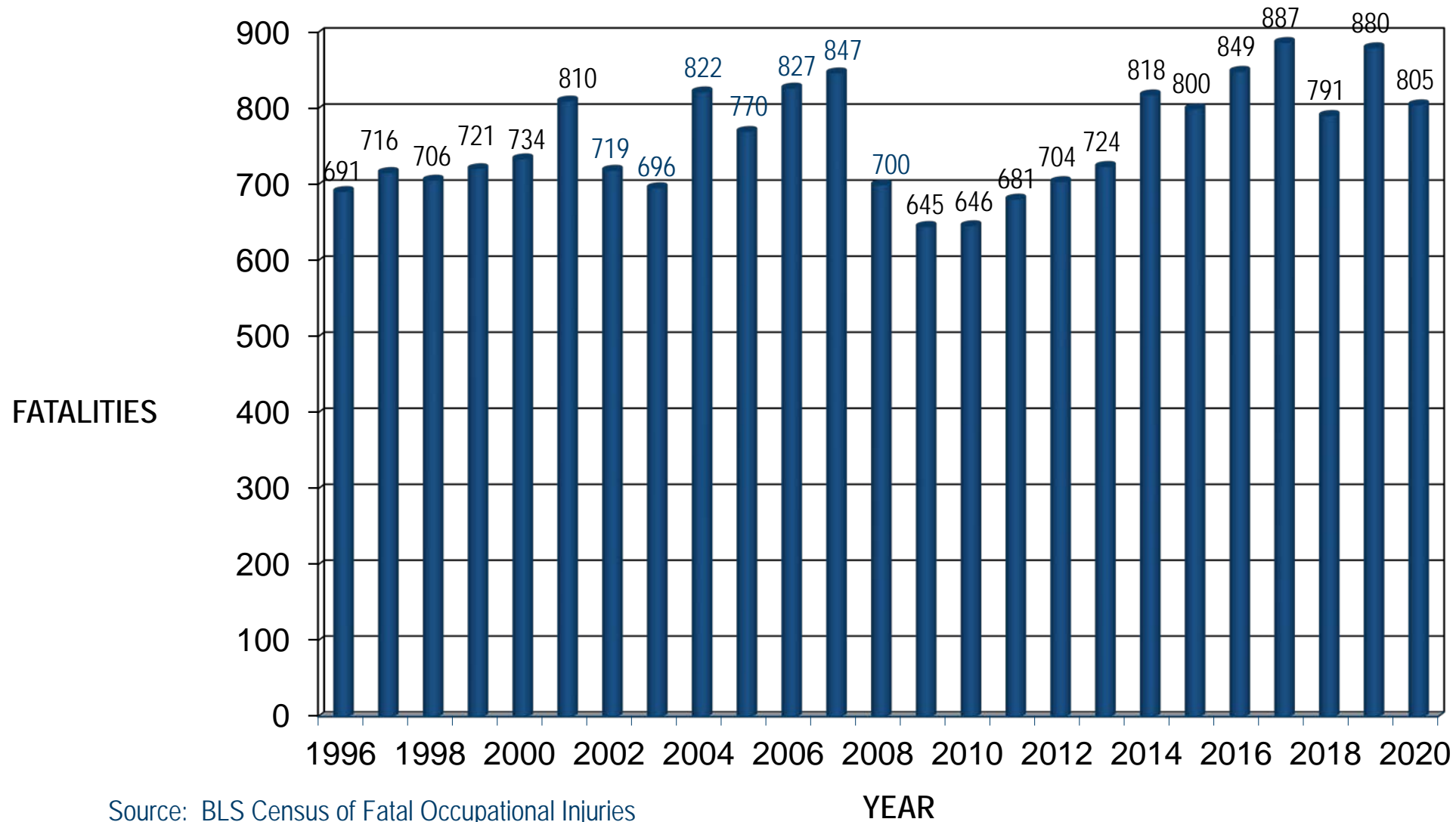
CONFLICTING REALITIES



Don't
happen
often

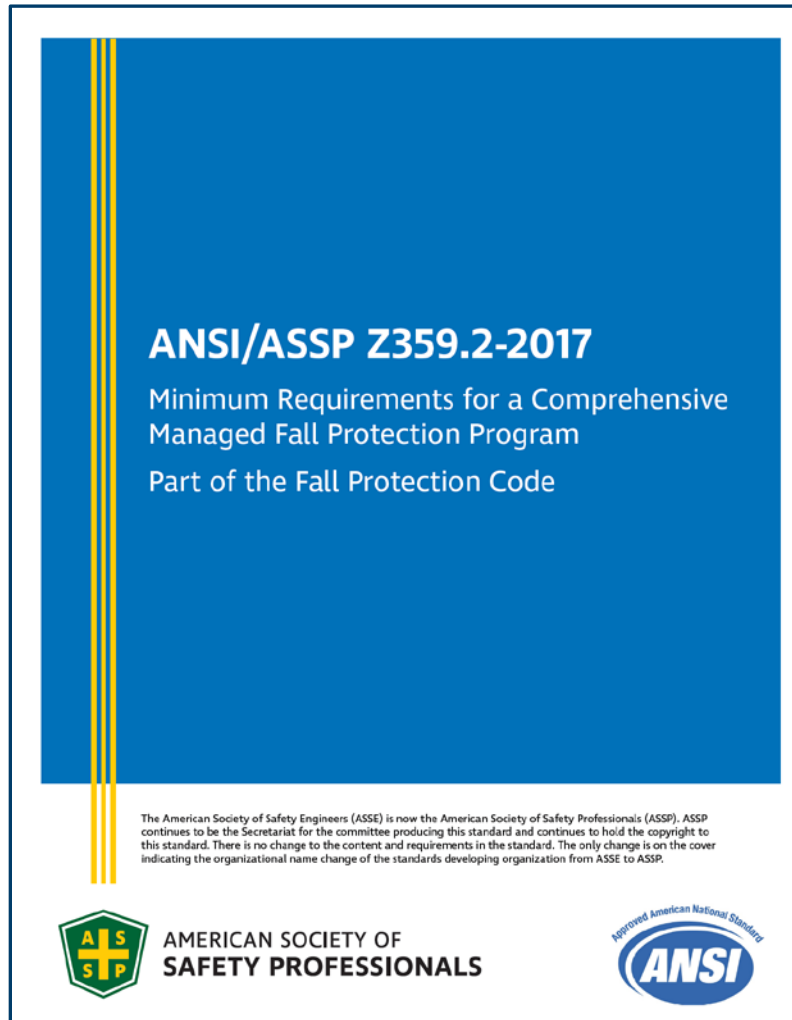
Catastrophic
and costly

TOTAL FALL FATALITIES




Source: BLS Census of Fatal Occupational Injuries

OPERATIONAL IMPROVEMENTS




ANSI/ASSP Z359.2-2017
Minimum Requirements for a Comprehensive
Managed Fall Protection Program
Part of the Fall Protection Code

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ASSP MANAGED FALL PROTECTION

- **Managed Fall Protection Course**

- <https://store.assp.org/PersonifyEbusiness/Events/ASSPEducationalEventsCalendar>



90+ Safety Courses
96% Recommendation Rate
Earn 5.6+ CEUS

safety FOCUS2020

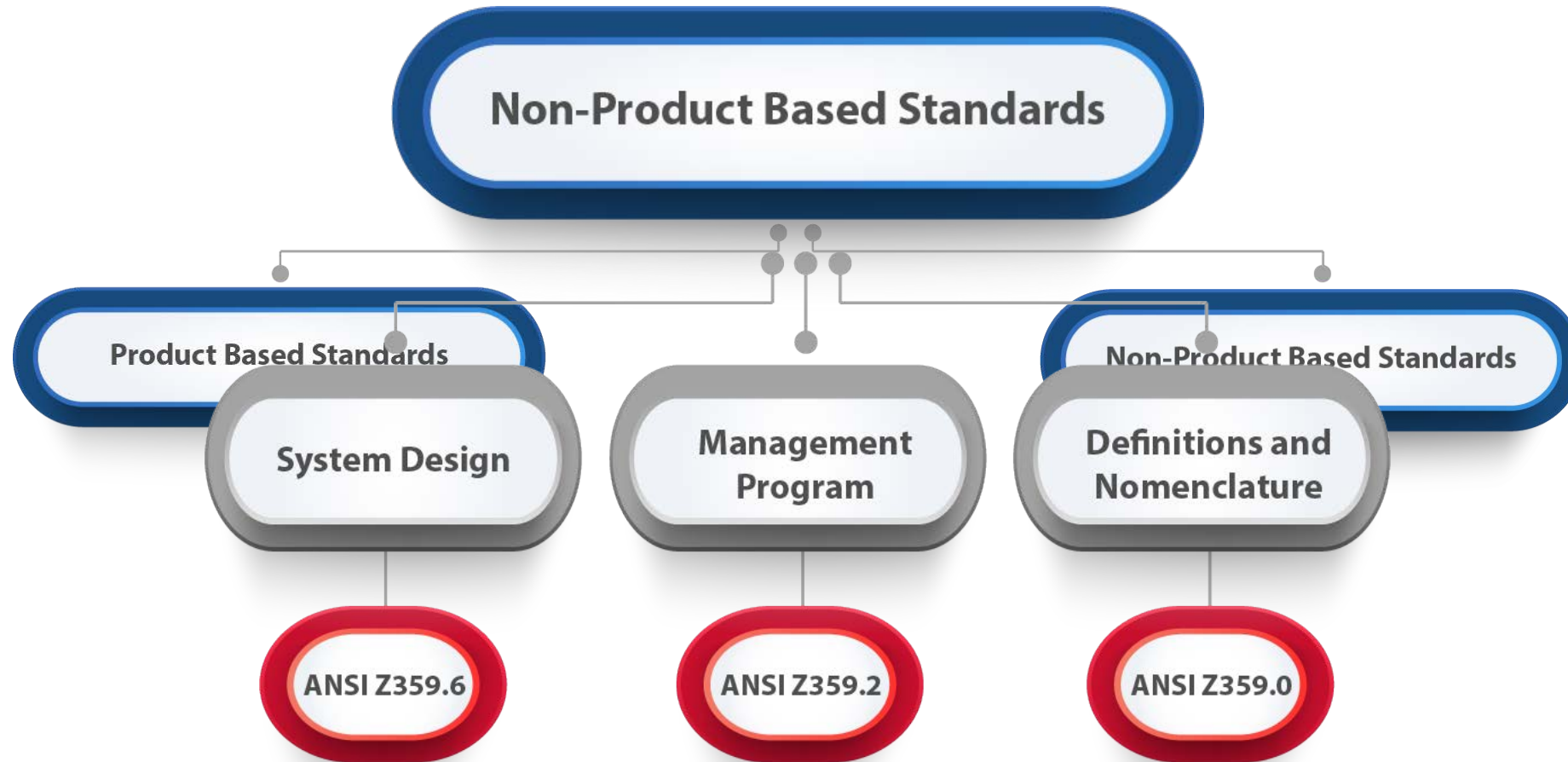
 February 13-20  Las Vegas, NV

NEW ANSI/ASSP Z359 STANDARDS

ANSI Z359.1

Product Based Standards

Non-Product Based Standards



ANSI Z359.1

Product Based Standards

Components

Systems

**Qualification
and Testing**

**ANSI Z359.9
ANSI Z359.11
to
ANSI Z359.18**

**ANSI Z459.1
ANSI Z359.3
ANSI Z359.4**

ANSI Z359.7

ANSI Z359.10

Program

Nomenclature

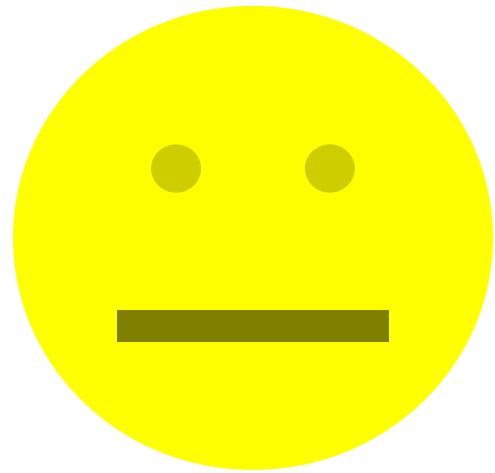
ANSI Z359.2

Managed Fall Protection Program Assessment

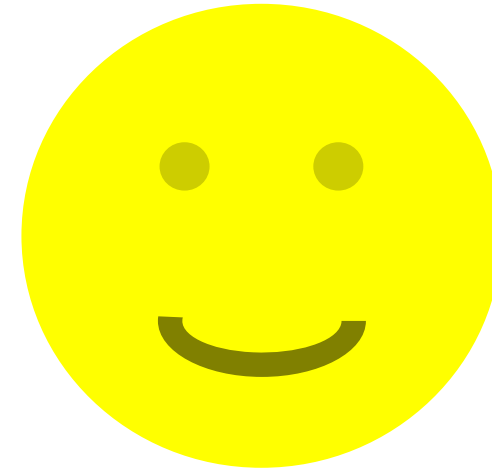


#	Fall Protection Program Element	Current Grade (A - F)	Priority (H/M/L)	Notes/Steps to Improve
1	Policy Statement: (Section 3.1) Does your organization have a managed fall protection policy statement?			
2	Employer Responsibilities: (Section 3.2) Does your organizational leadership dedicate resources for the fall protection program?			
	Program Administrator: (Section 4.2)			

Z359.2 GAP ANALYSIS



Current State



Desired/Required
State

“NEWER” STANDARDS

- 2016
 - Z359.1: Fall protection code
 - Z359.16: Ladder climbing fall arrest systems
 - Z359.6: Design of active systems
- 2017
 - Z359.2: Managed fall protection program
 - Z359.3: Lanyards and positioning lanyards
 - Z359.18: Anchorage connectors

Fall Protection & Fall Restraint (Z359)



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“NEWER” STANDARDS

- 2019
 - Z359.12: Connecting components
 - Z359.7: Qualification and verification testing
- 2020
 - Z359.1: Fall protection code

Fall Protection & Fall Restraint (Z359)



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2021 STANDARDS

- Z359.1 1: Full body harnesses
- Z359.1 4: Self-retracting devices
- Z459.1: Rope access
- Z359.9: Descenders

**Fall Protection
& Fall Restraint
(Z359)**



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FUTURE STANDARDS

- Other Z359 standards projects:
 - Z359.17: Horizontal lifelines
 - Z359.19: Rigid rail systems
 - Z359 National Work at Height Task Force

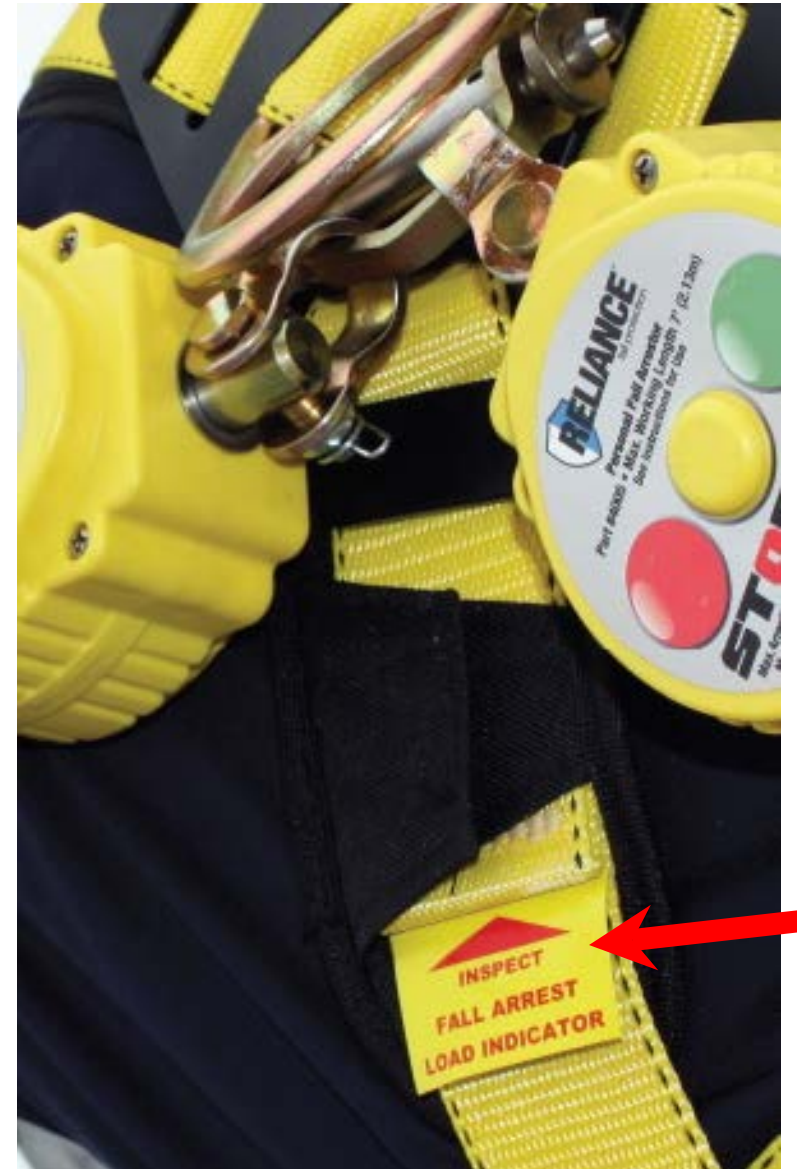
Fall Protection & Fall Restraint (Z359)



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ANSI Z359.11—HARNESSES

- Effective date: May 1, 2022
- Modified head-first dynamic test procedure
- Alternative fall arrest indicator testing



ANSI Z359.1 1—HARNESSES

- New stretch-out requirements for frontal connections
- Allowance for harnesses with integrated energy absorbers
- Minor changes to labeling requirements



ANSI Z359.14 UPDATES

- Effective date: August 1, 2022
- Types:
 - SRLs, SRL-Rs, and SRL-Ps
- Classes:
 - Established classes applicable to all types
- Static Strength:
 - Increased by 20% and meets 2:1 expectations



ANSI Z359.14 UPDATES

- Energy Capacity:
 - Increased for SRL-Ps to improve outcomes in common misuse
- End-User Guidance:
 - Appendix B provides actionable information to users of SRDs

1" Square Icons

Arial font,
black on
white background

Arial font,
white on
black background

10 pt. font →

Class

Class

30 pt. font →

1

2

7.5 pt. font →

Anchor at or
above dorsal D-ring

Anchor above or
below dorsal D-ring

ANSI Z359.1 4: SELF-RETRACTING DEVICES

Twin leg lanyard vs. SRL-P



TWIN LEG LANYARD VS. SRL-P

Compare and contrast

- Resiliency to misuse/overload
- Criteria in ANSI
 - Personal EA lanyards
 - SRDs
- Edge confusion
- OSHA strength requirements



TWIN LEG LANYARD VS. SRL-P

SRL-P sold as a “safer” alternative

- Tensile strength
- Wishbone test
- Dual attachment test
- Side dee-ring test
- Cost: \$100-200 vs. \$300-600



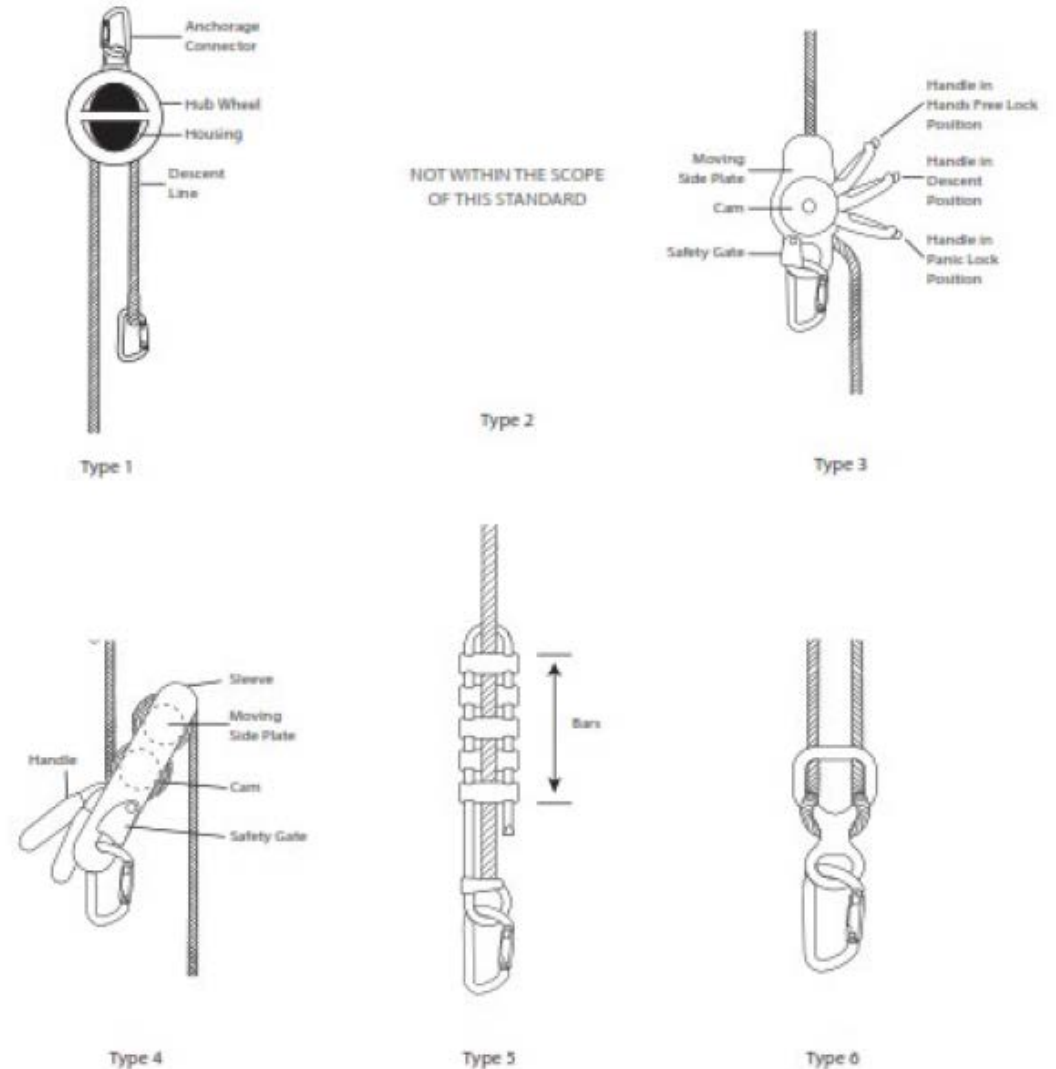
ANSI Z459.1—ROPE ACCESS

- Effective date: August 15, 2022
- Baseline criteria for employers to use in establishing and evaluating rope access systems for work at height



ANSI Z359.9—DESCENDERS

- Effective date: September 15, 2022
- 5 “types” outlined
 - Type 1 to Type 6 (Type 2 not used)
- Decision tree (Figure 2)
 - Automatic control?
 - Hands-free locking?
 - Panic locking function?
 - Mechanically variable function?



TOP 5 WAYS

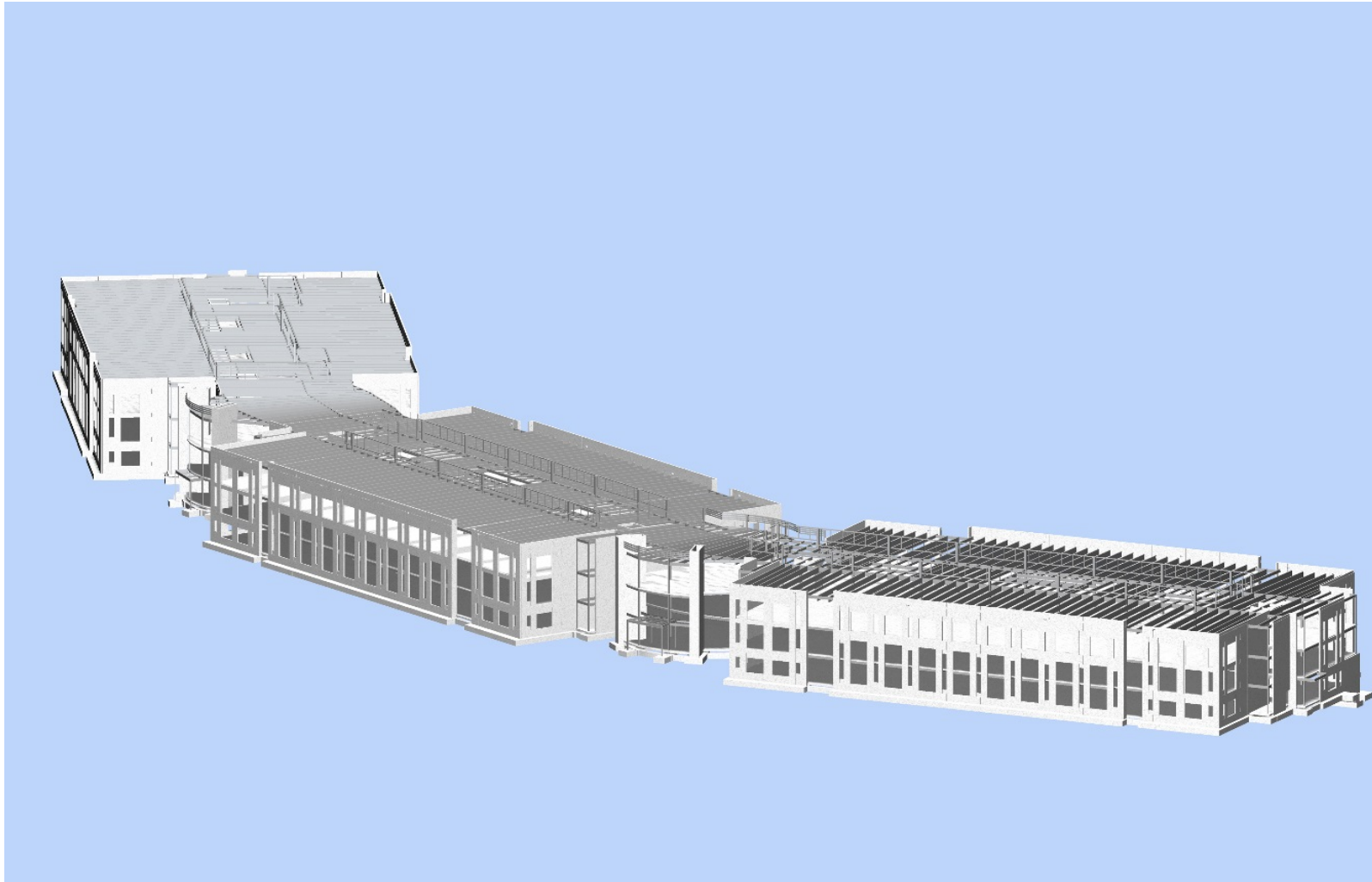
TOP 5 WAYS

- 1 Apply PtD for new buildings and processes
- 2 Do a risk assessment the right way
- 3 Use less personal protective equipment
- 4 Focus on certified systems, not just equipment
- 5 Provide general and system-specific training

#1 APPLY PtD

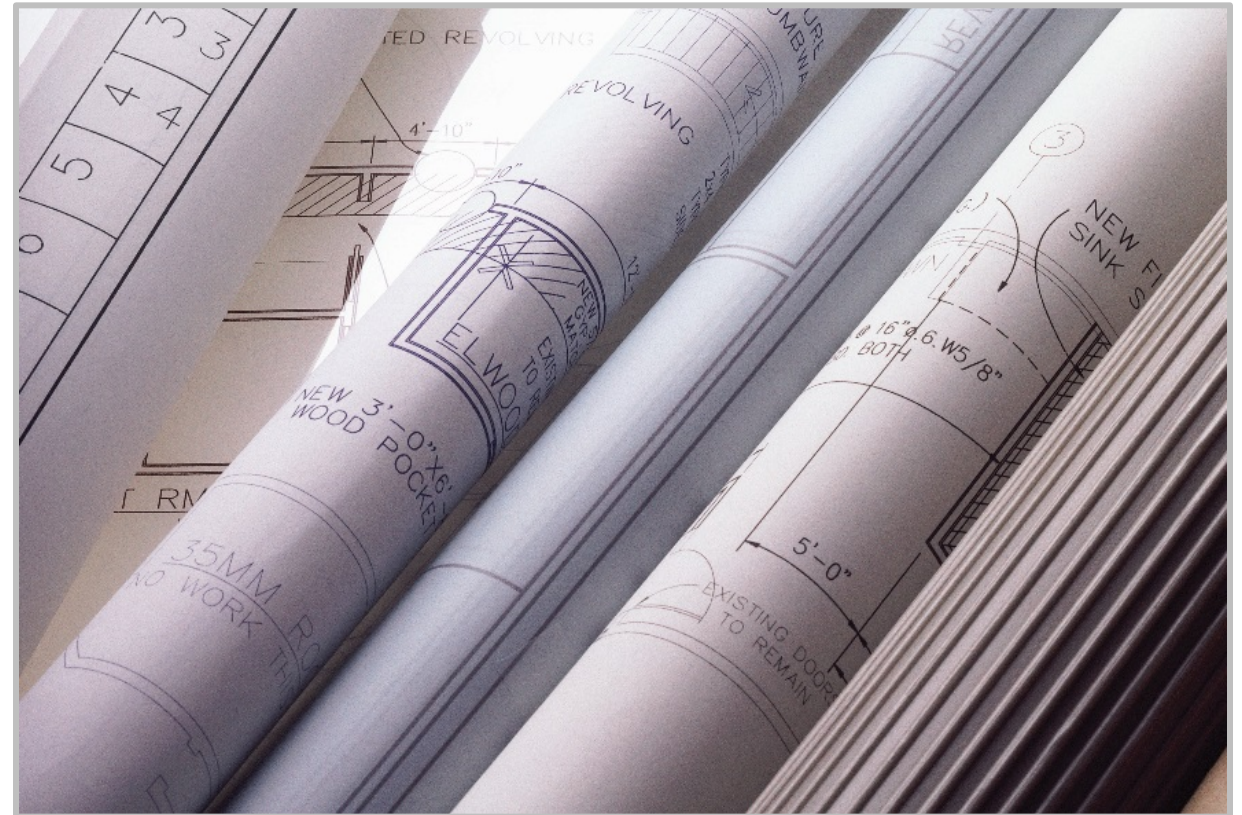
HAZARD IDENTIFICATION & EVOLUTION

WHEN TO THINK FALL PROTECTION



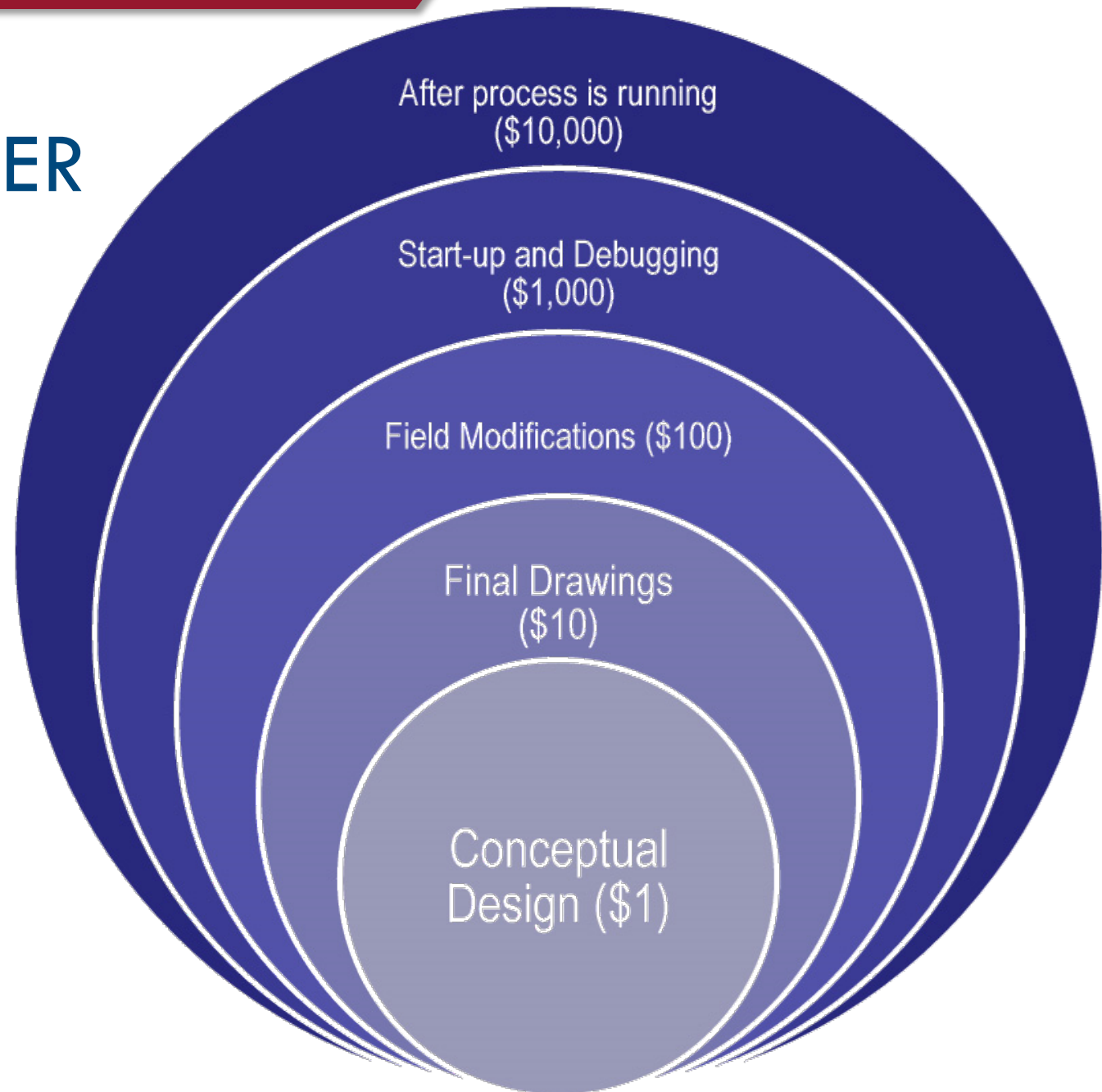
PREVENTION THROUGH DESIGN

- Implement safety during programming and design
 - Considers safety for:
 - Construction
 - Operations
 - Maintenance
 - Requires team approach



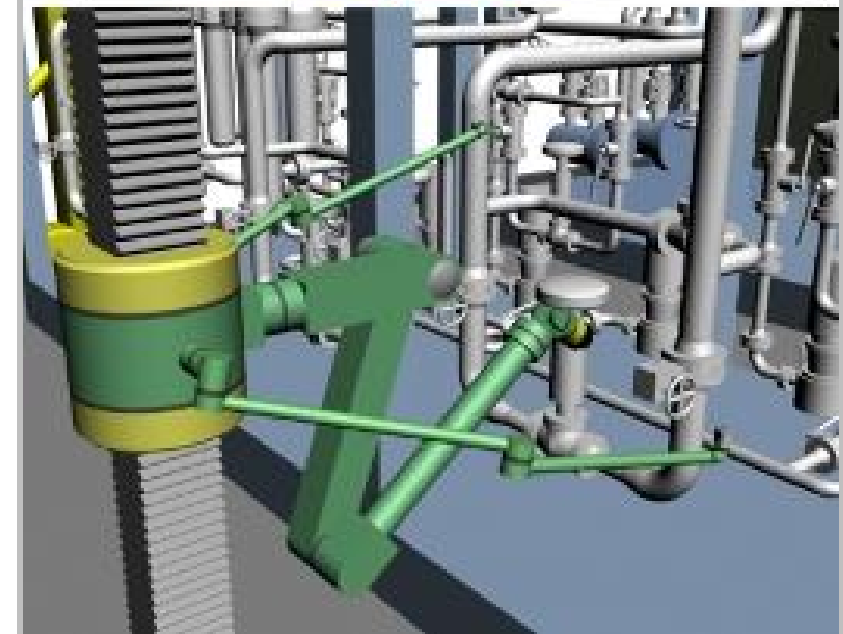
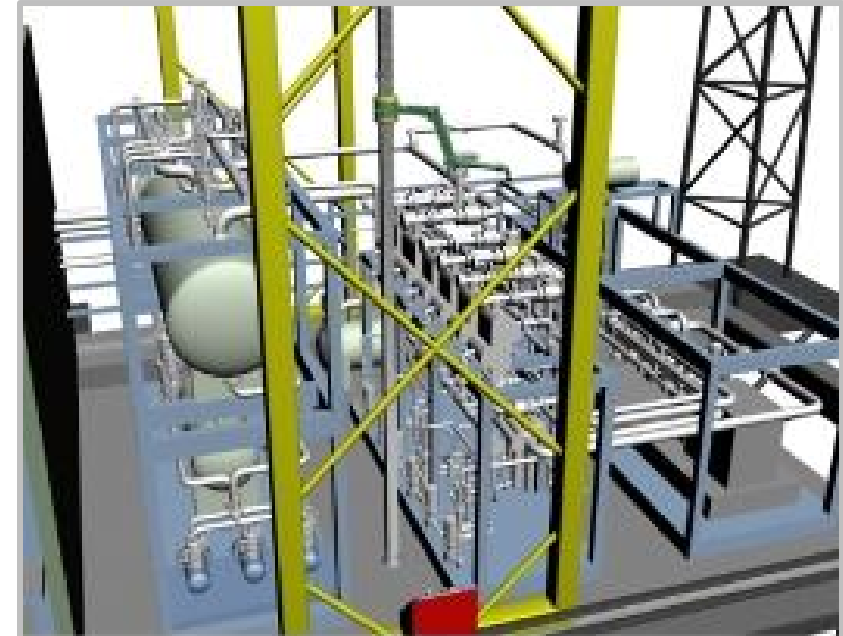
THE SOONER THE BETTER

- Eliminates:
 - Design costs
 - Additional drawings
 - Mobilization of the contractor
 - Field modifications
 - Rework of interferences
 - Use of potentially riskier means of hazard abatement



PTD EXAMPLE

- Before
- After
 - Hazards eliminated or controlled passively
 - Processes and products changed
 - Cost savings
 - Fewer fall protection issues = less equipment, training, and management



#2 CONDUCT A RISK ASSESSMENT

HAZARD IDENTIFICATION & EVALUATION

VALUE OF A LIST



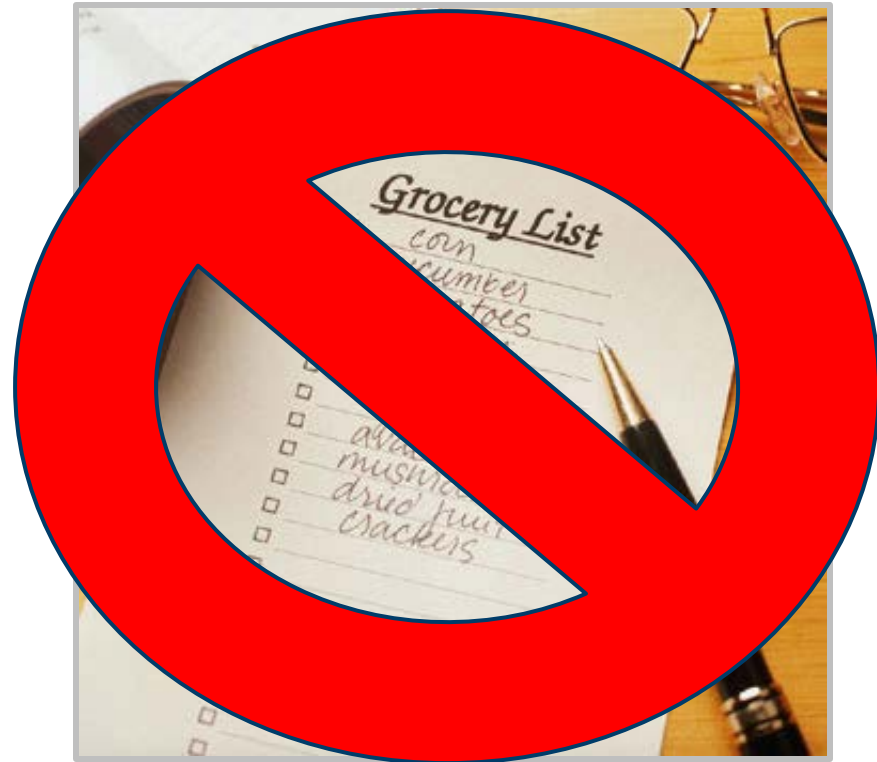
WHEN YOU DON'T HAVE A LIST...

- You forget important things
- You waste money
- You're less efficient



WHEN YOU DON'T HAVE AN ASSESSMENT

- You forget important things
- You waste money
- You're less efficient



WHERE IS YOUR GREATEST RISK?



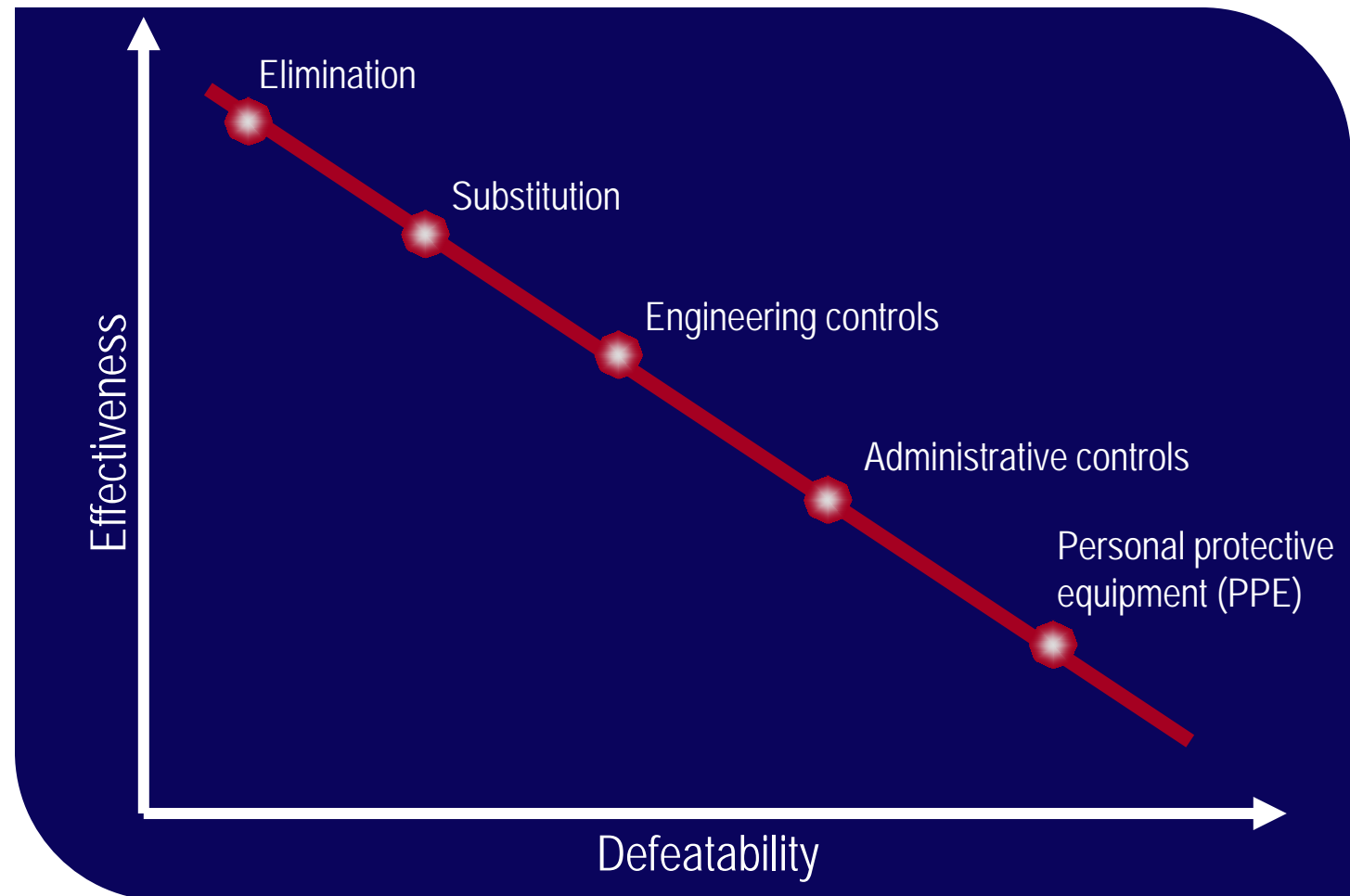
WHERE IS YOUR GREATEST RISK?



#3 USE LESS PPE

HAZARD ABATEMENT

SAFETY: HIERARCHY OF CONTROL



ENGINEERING CONTROLS

- Requires no user action to work properly
 - Minimal training



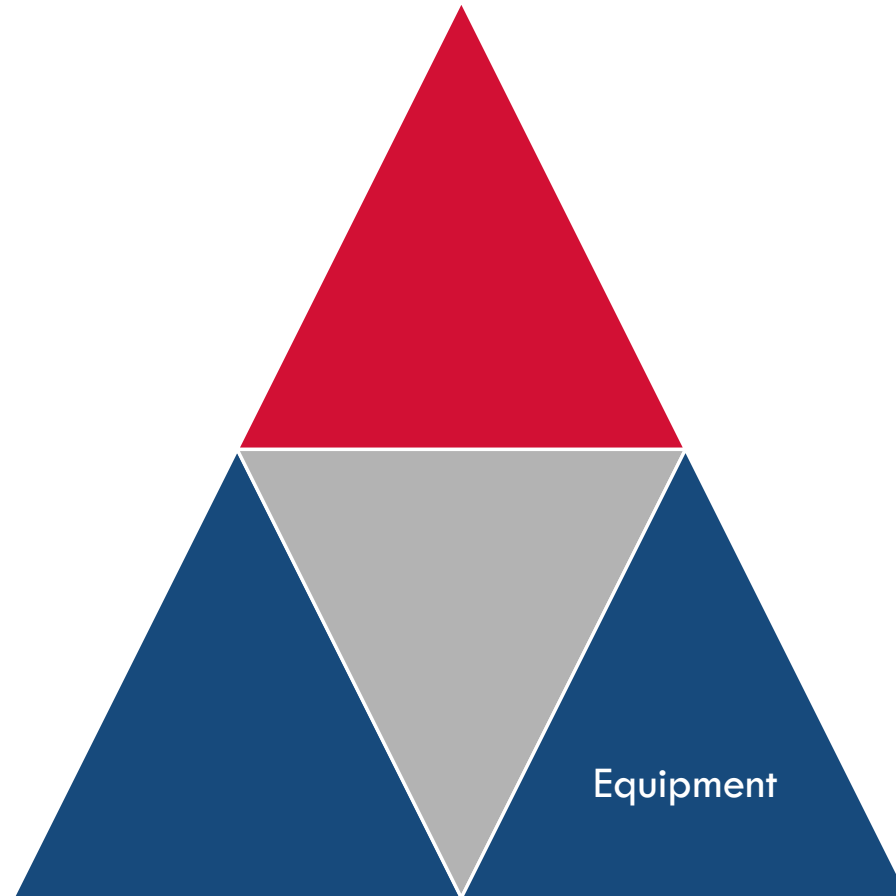
PPE SYSTEMS

- Too many opportunities to fail
 - Inadequate anchorage
 - Equipment misuse
 - Incompatible components
 - Lack of procedures
 - Insufficient clearance
 - Improper training
 - Lack of rescue planning

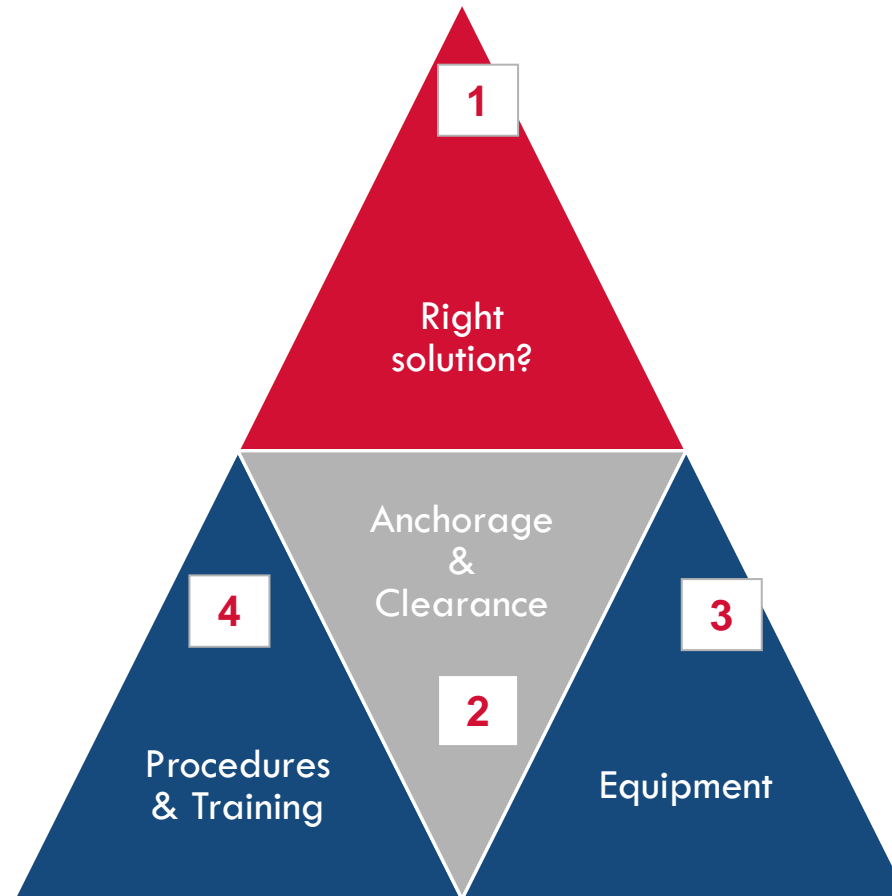


#4 FOCUS ON CERTIFIED SYSTEMS HAZARD ABATEMENT

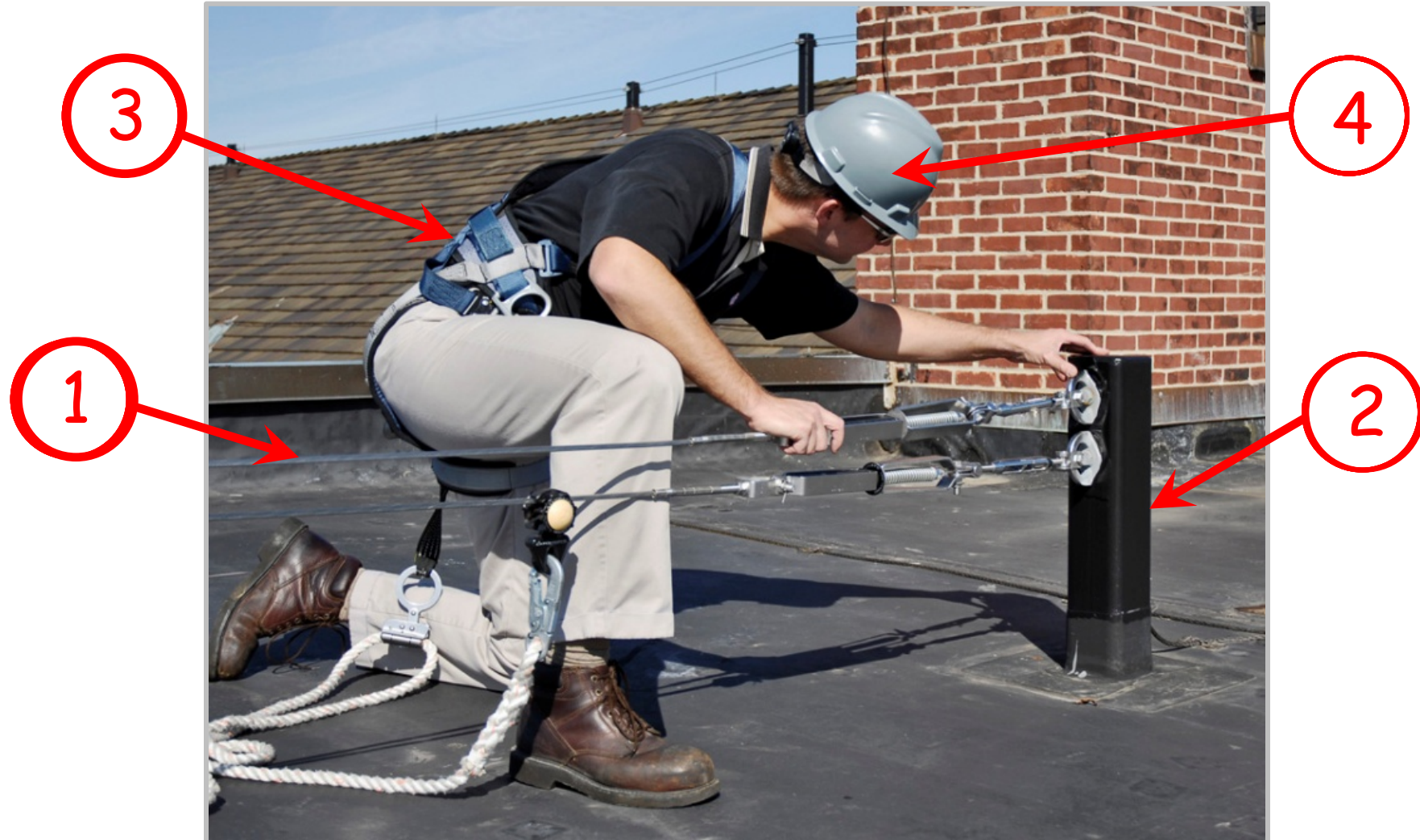
CERTIFIED?



CERTIFIED?



WHAT TO LOOK FOR



#5 PROVIDE QUALITY TRAINING

GENERAL AND SPECIFIC TRAINING

WHO?

- Authorized person
 - Those working at heights
- Competent person
 - Safety personnel
 - Engineers involved in project planning and execution
 - Supervisors—skilled trades and maintenance groups

CONTENT

- ANSI Z359 guidance
 - 15 duties of a competent person
 - Z359.2 §3.2.4
 - Authorized person training requirements
 - Z359.2 §3.3.6.3
 - General knowledge
 - System specific

ACADEMIC BACKGROUND

- Fall protection program requirements
- Fall hazard identification
- Fall hazard abatement
 - Engineering controls
 - Lift equipment and scaffolding
 - Personal fall arrest systems
 - Anchorages
 - Fall clearance

HANDS-ON AND INTERACTIVE

- Equipment inspection
- Equipment use and limitations



TOP 5 WAYS

- 1 Apply PtD for new buildings and processes
- 2 Do a risk assessment the right way
- 3 Use less personal protective equipment
- 4 Focus on certified systems, not just equipment
- 5 Provide general and system-specific training

RECOMMENDED ACTION #1

- Evaluate your organization's use of the standards
 - ANSI Z59.1 (available free)
 - ANSI Z359.2 (program)

ANSI/ASSP Z359.2-2017

Minimum Requirements for a Comprehensive
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RECOMMENDED ACTION #2

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RECOMMENDED ACTION #3

- Join the committee
 - Especially users
 - Next meeting: April 26-29, 2022
 - Lauren Bauerschmidt
LBauerschmidt@ASSP.org
 - Jennie Dalesandro JDalesandro@ASSP.org



RECOMMENDED ACTION #4

- Evaluate your equipment inventory and systems



ries



CLOSING EXERCISE: IMAGINE!

Imagine every year on *May 22nd* at precisely 10:15 a.m., all your workers simultaneously “tested” their fall protection systems.

What would happen? Are you good or just lucky?



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Questions?

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