
FALL PROTECTION SAFETY AWARENESS SEMINAR

AGENDA

Welcome

Opening Remarks

National Safety Stand-Down to Prevent Falls

Safety Data

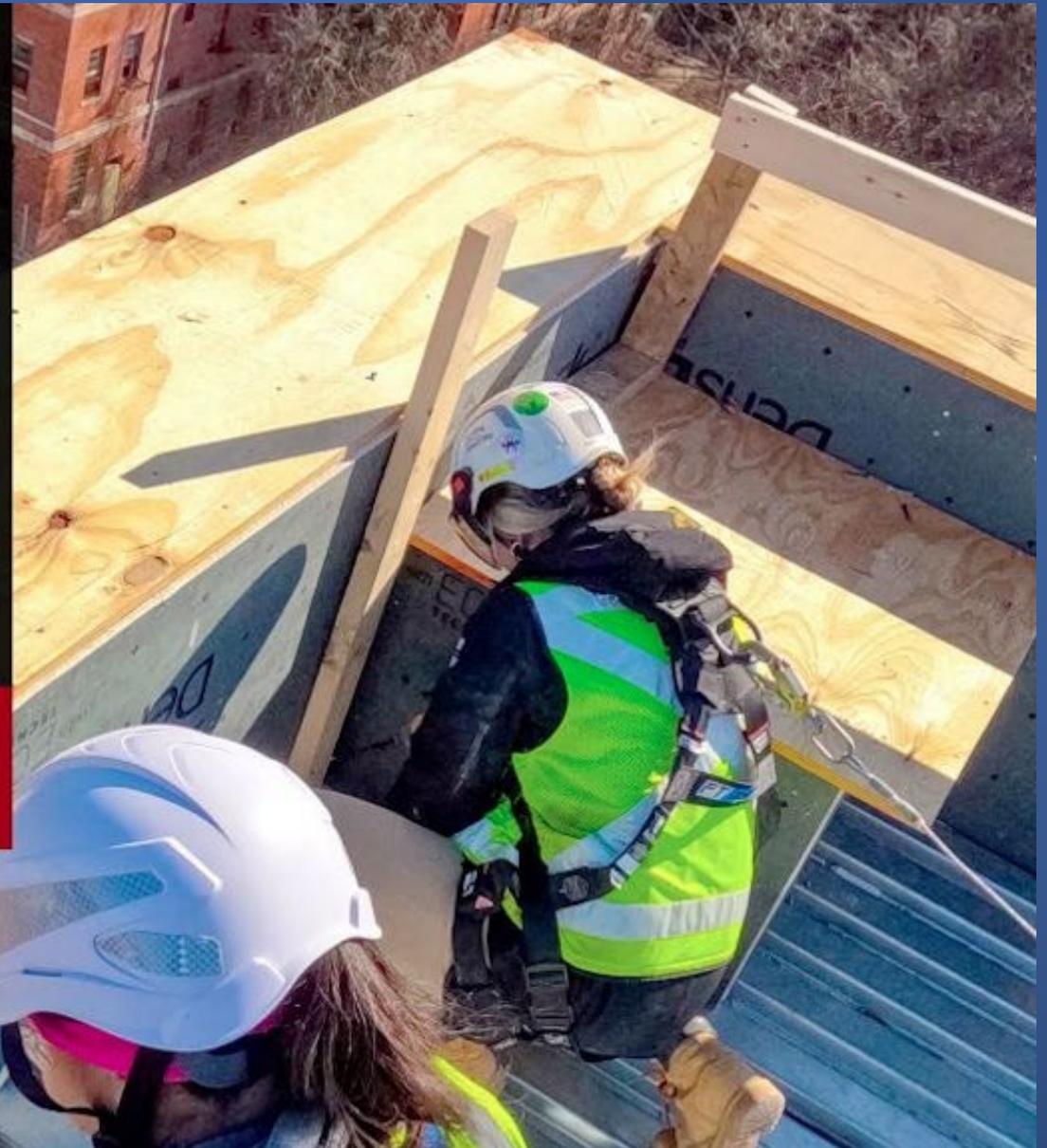
Fall Protection Requirements & Systems

Implementation & Enforcement

Q&A

NATIONAL SAFETY STAND-DOWN TO PREVENT FALLS IN CONSTRUCTION

MAY 6-10, 2024

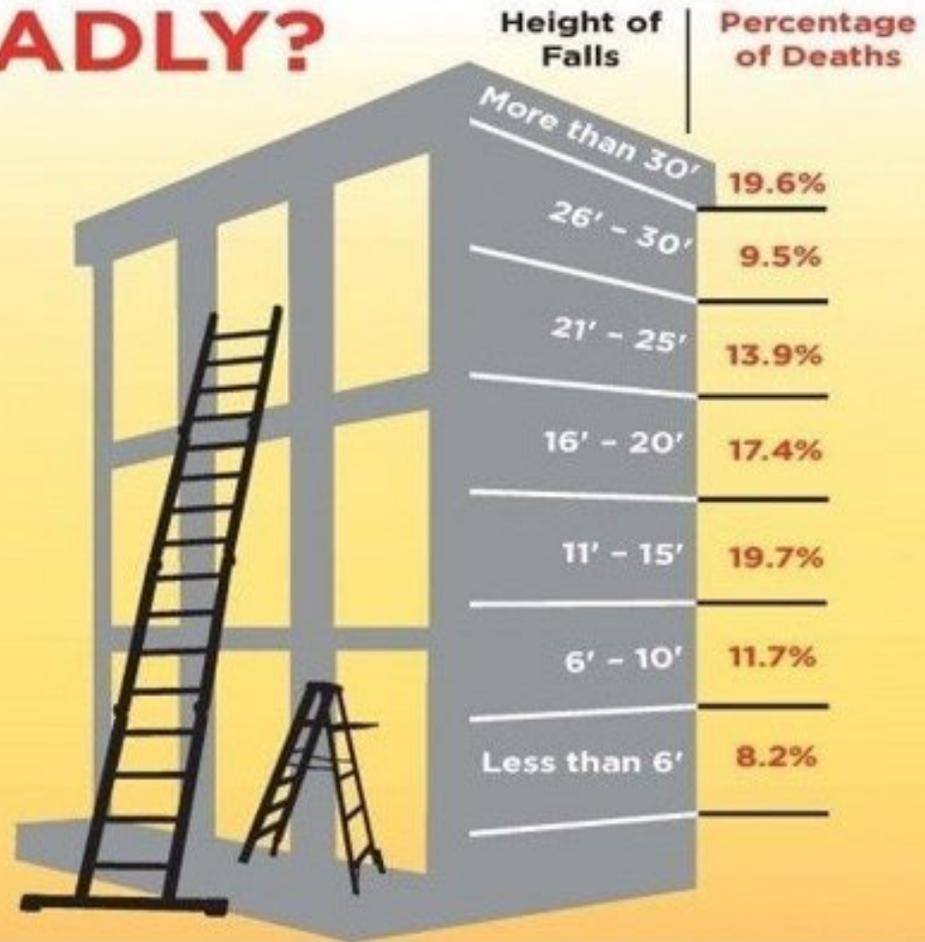


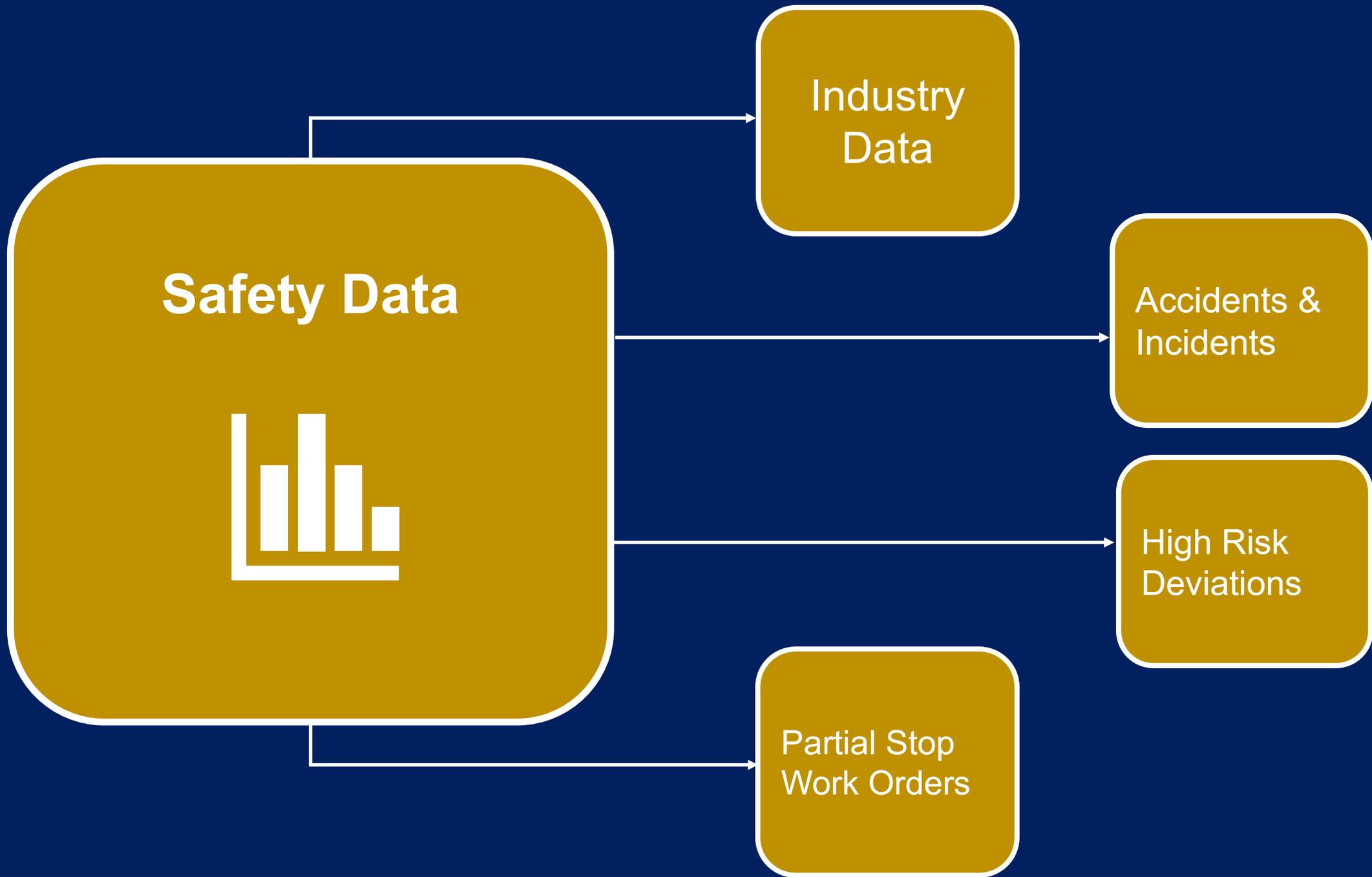
Why Fall Protection?

How High is **DEADLY**?

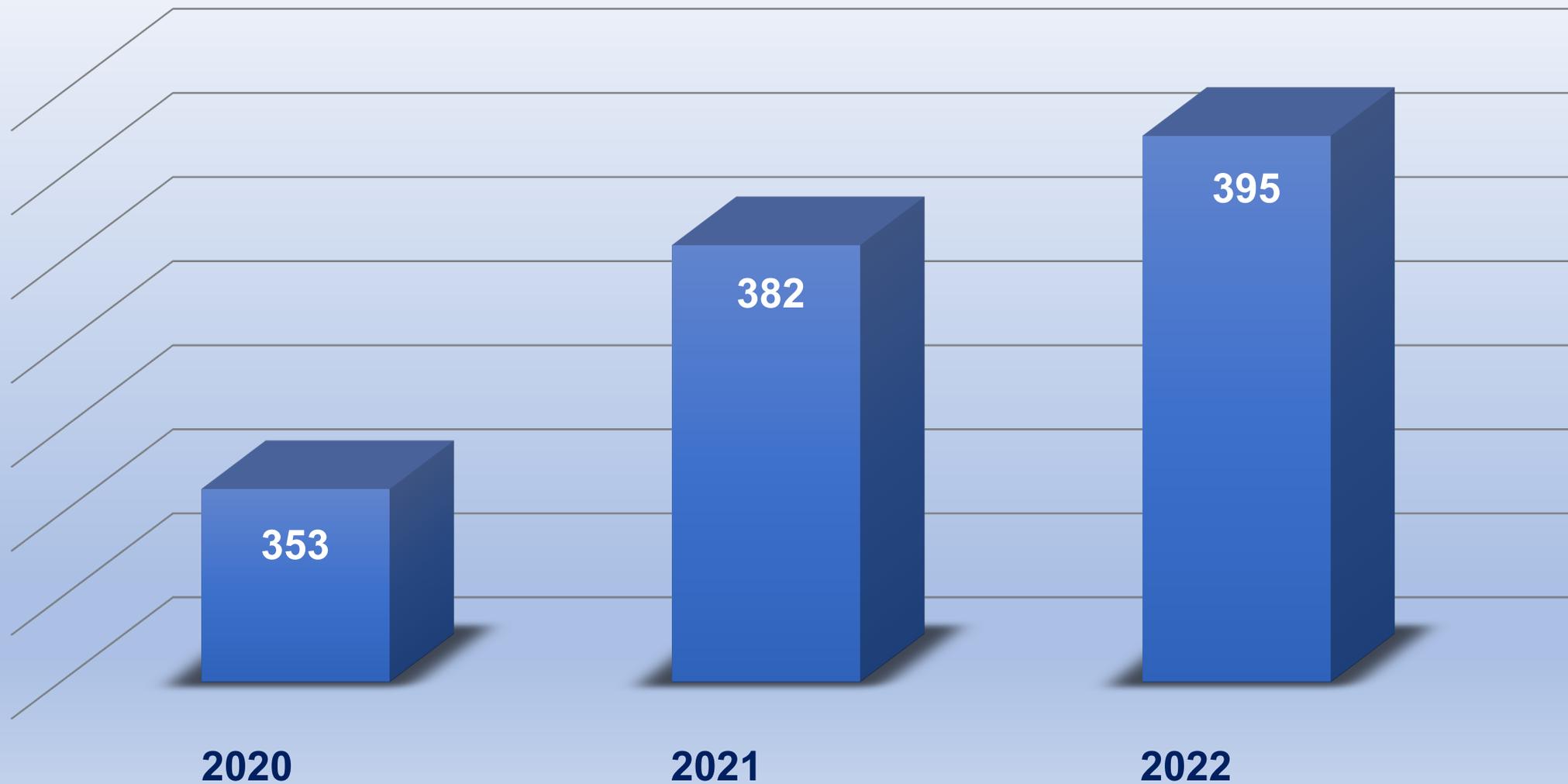
You may not be very high off the ground but if you fall, it could be deadly.

PROTECT your employees, your co-workers, yourself.





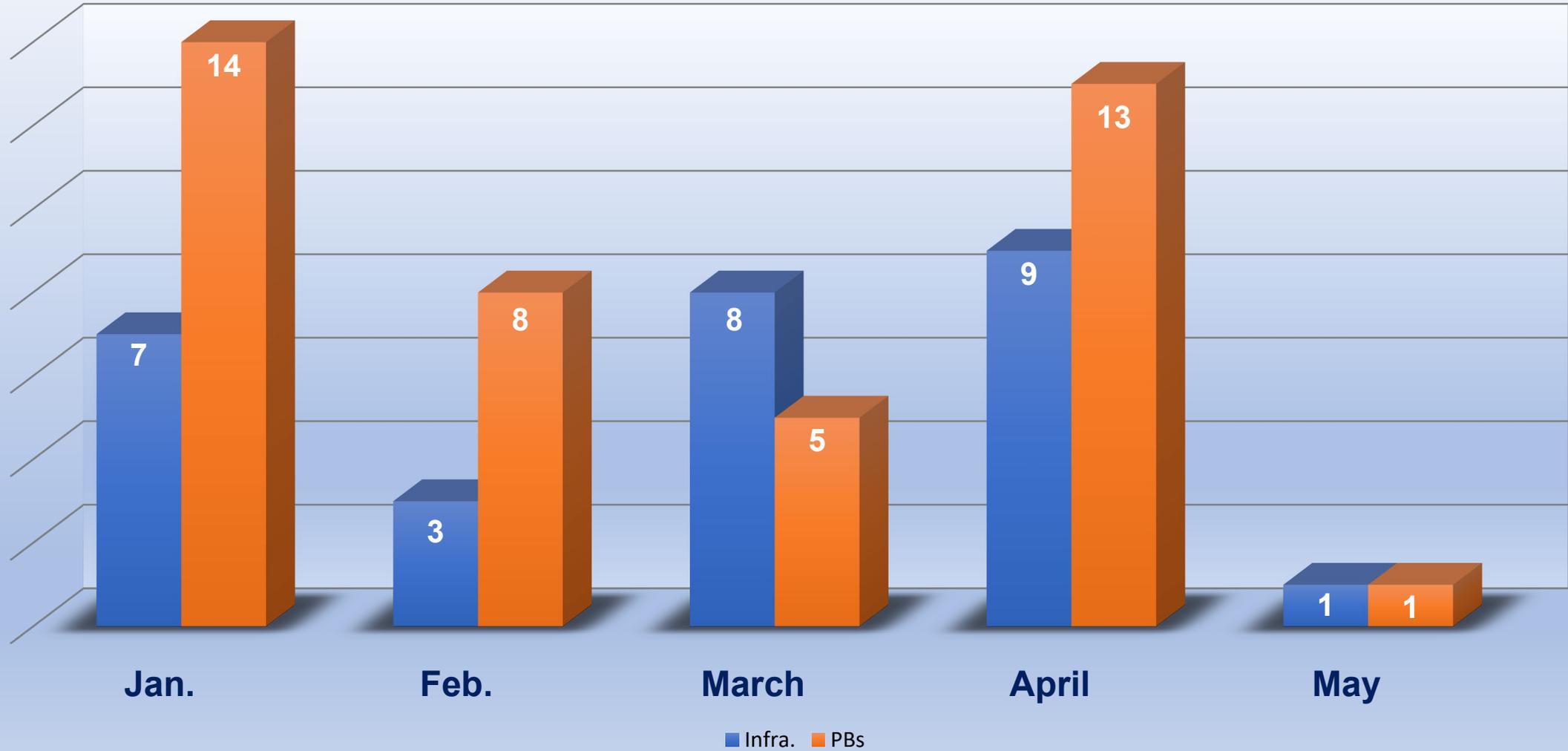
Fall Fatalities - Construction Industry



Falls - DDC Construction Projects



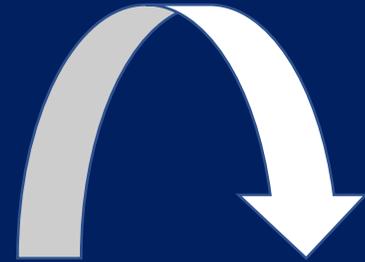
Fall Protection High Risk Deviations - YTD



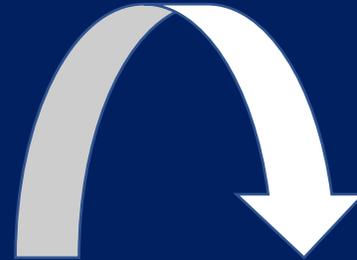
Fall Protection PSWOs on DDC Projects



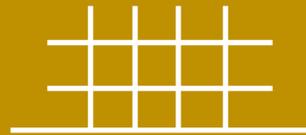
Fall Protection Requirements



General Construction



Scaffolds



Steel Erection



At What Height is Fall Protection **REQUIRED?**



OSHA requires that each employee on a walking/working surface with an unprotected side or edge which is 6 feet or greater above a lower level be protected from falling (Subpart M)



Each employee on a scaffold more than 10 feet above a lower level shall be protected from falling to that lower level (Subpart L)



Each employee engaged in steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet above a lower level shall be protected from fall hazards (Subpart R)



Note: Connectors and employees working in controlled decking zones shall comply with fall protection requirements under **29 CFR 1926.760 (b) & (c)**.

Fall Protection Systems



Guardrail System

Personal Fall Arrest System

Personal Fall Restraint System

Safety Net System

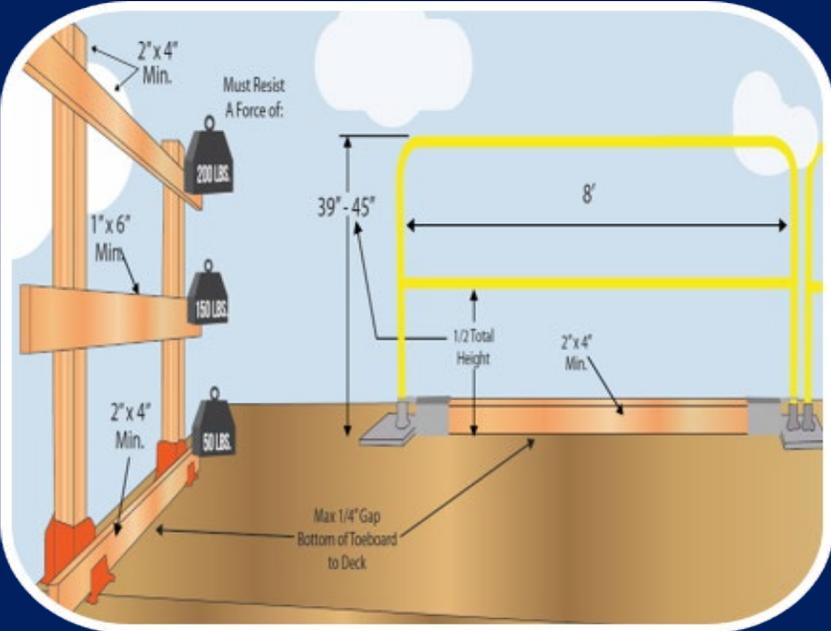
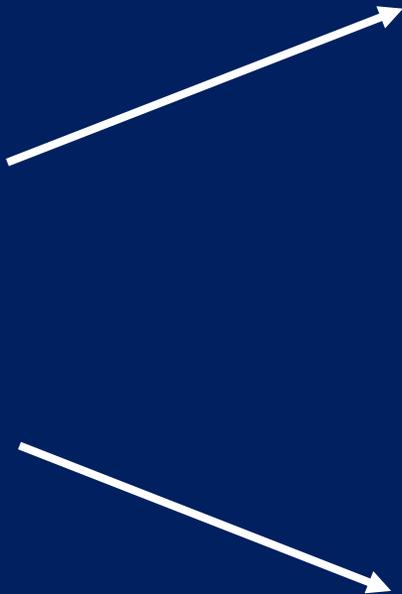
Positioning Device System

Warning Line System

Controlled Access Zone

Safety Monitoring System

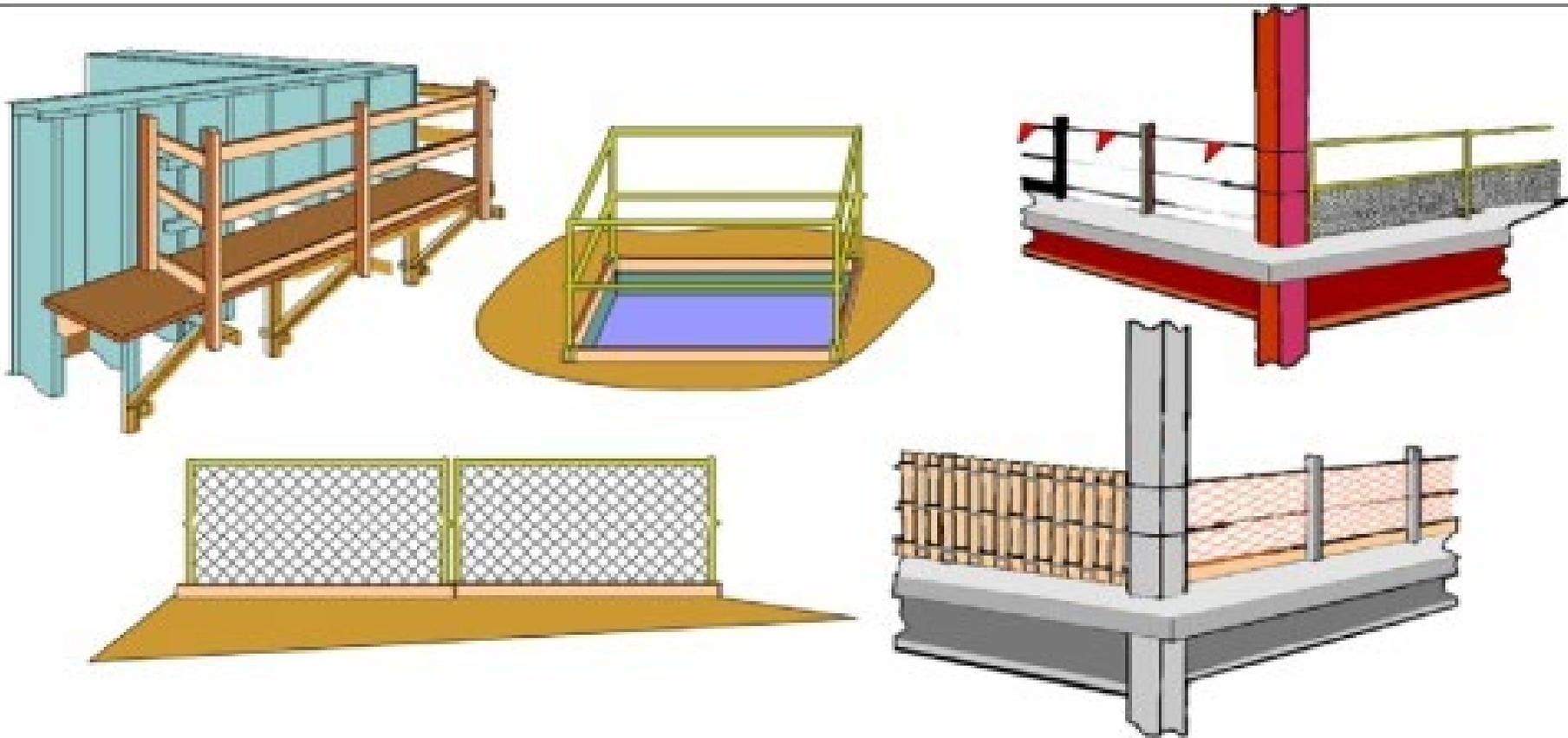
Guardrail Systems

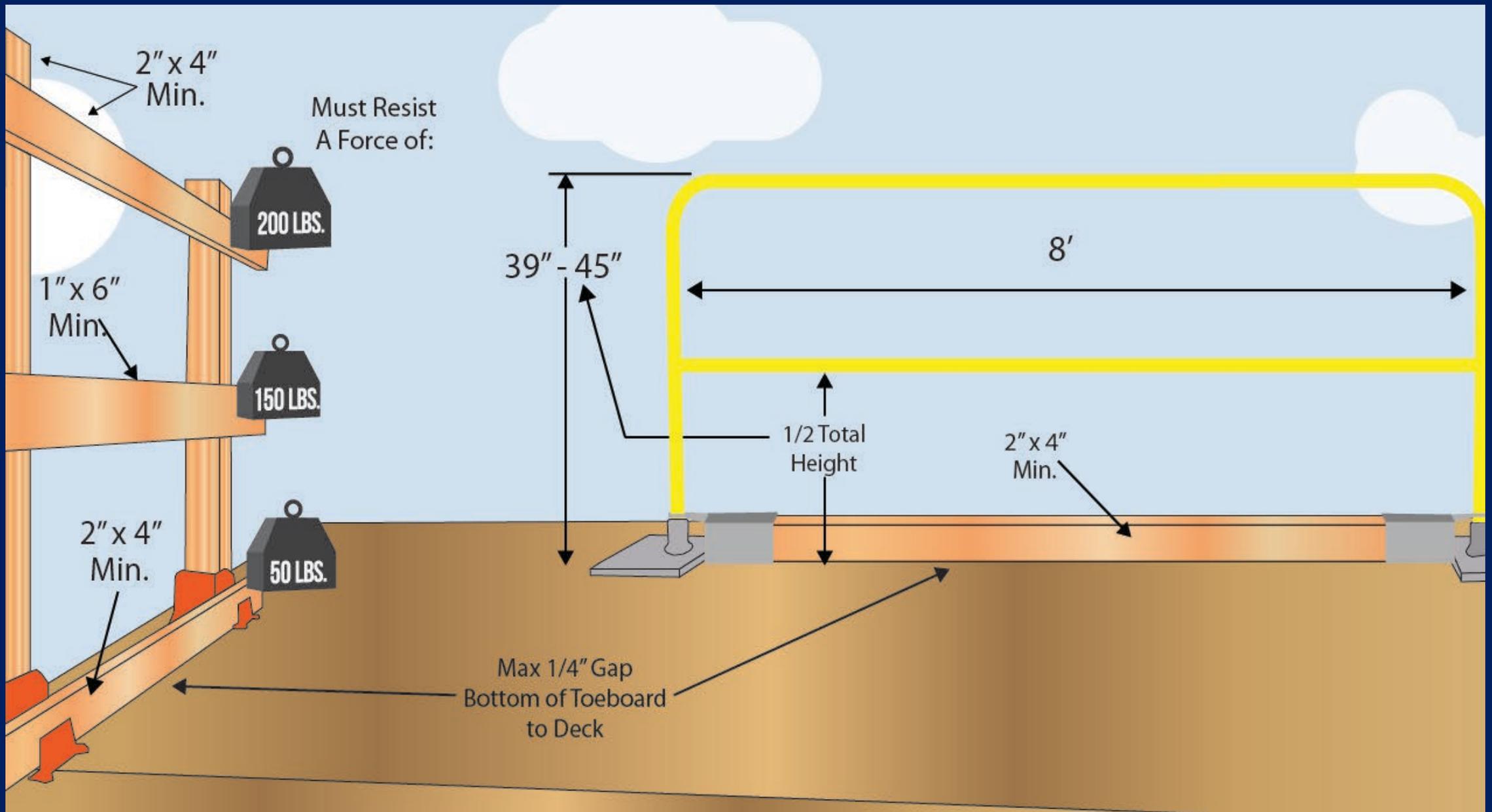


Guardrail Systems

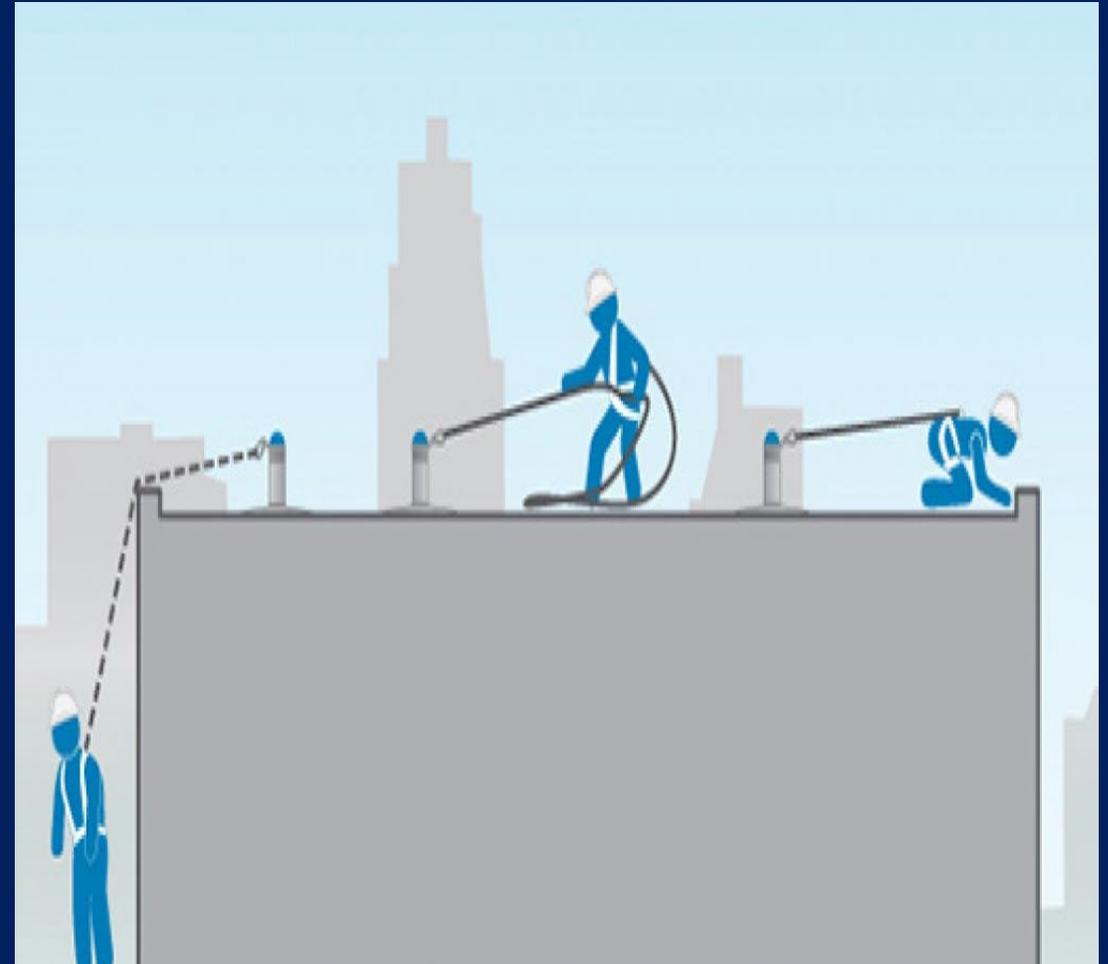
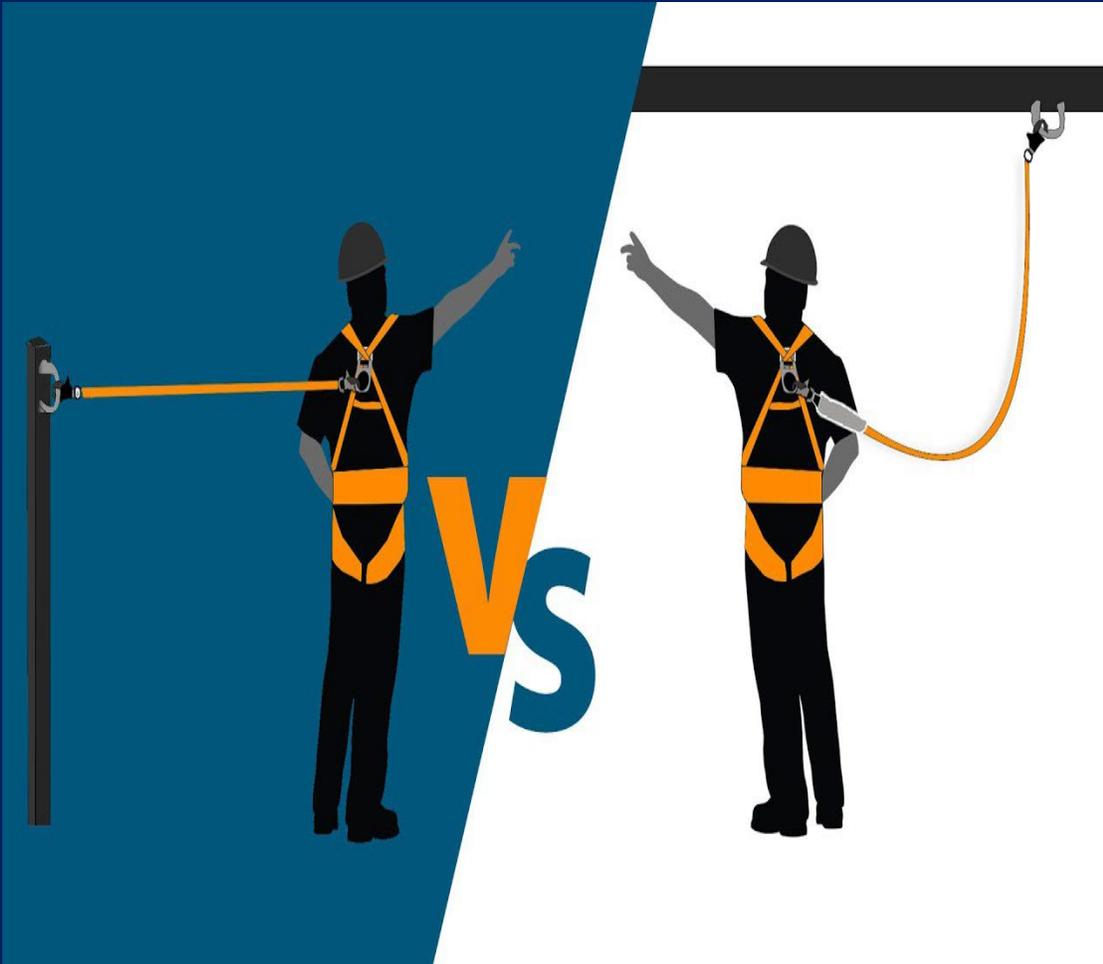
OSHA Subpart M – 1926.502(b)

GI

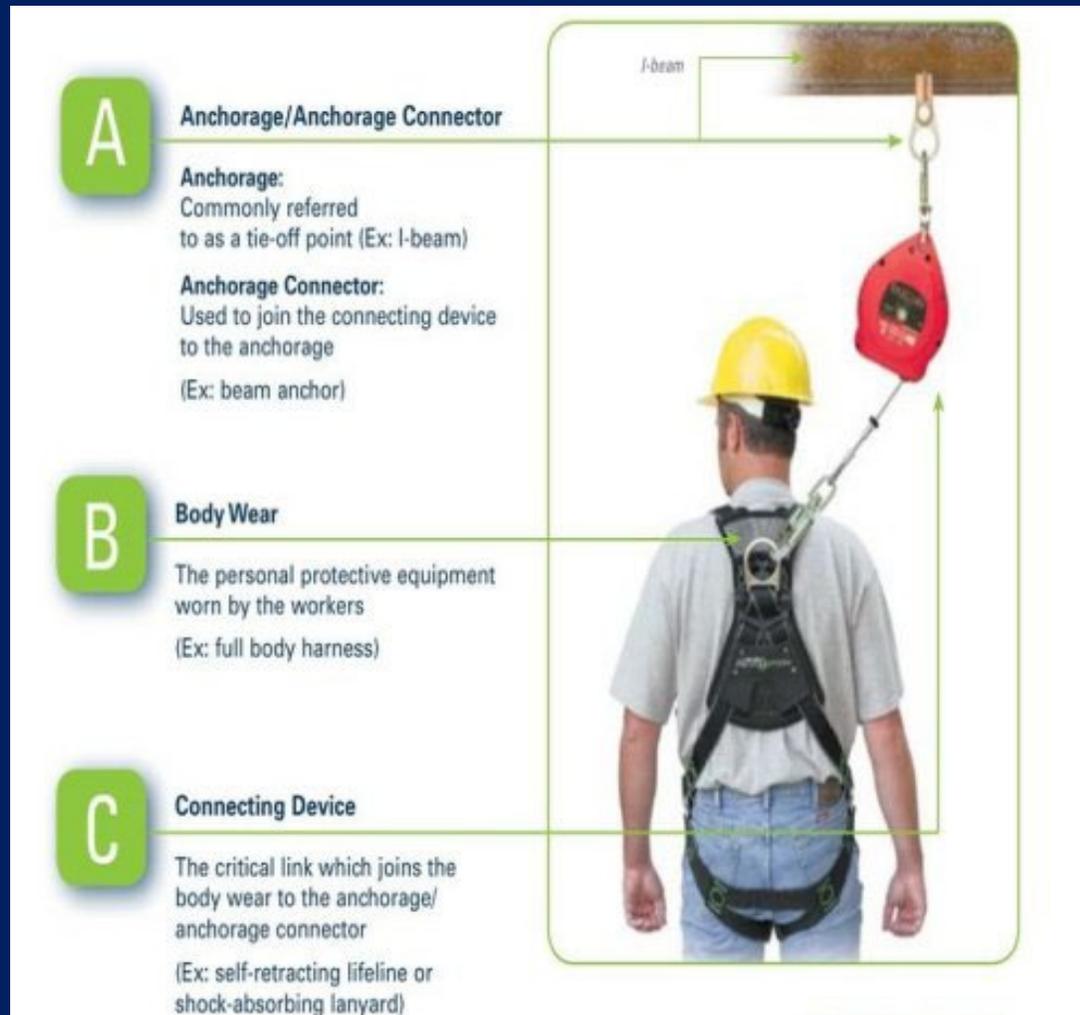




Fall Restraint System vs Fall Arrest System

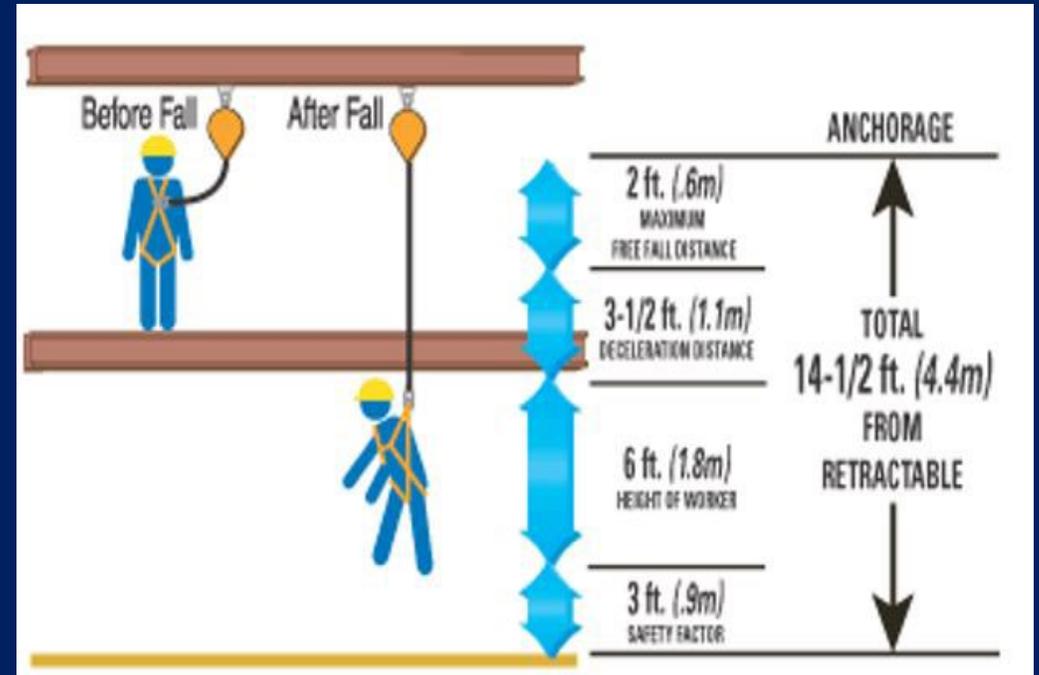
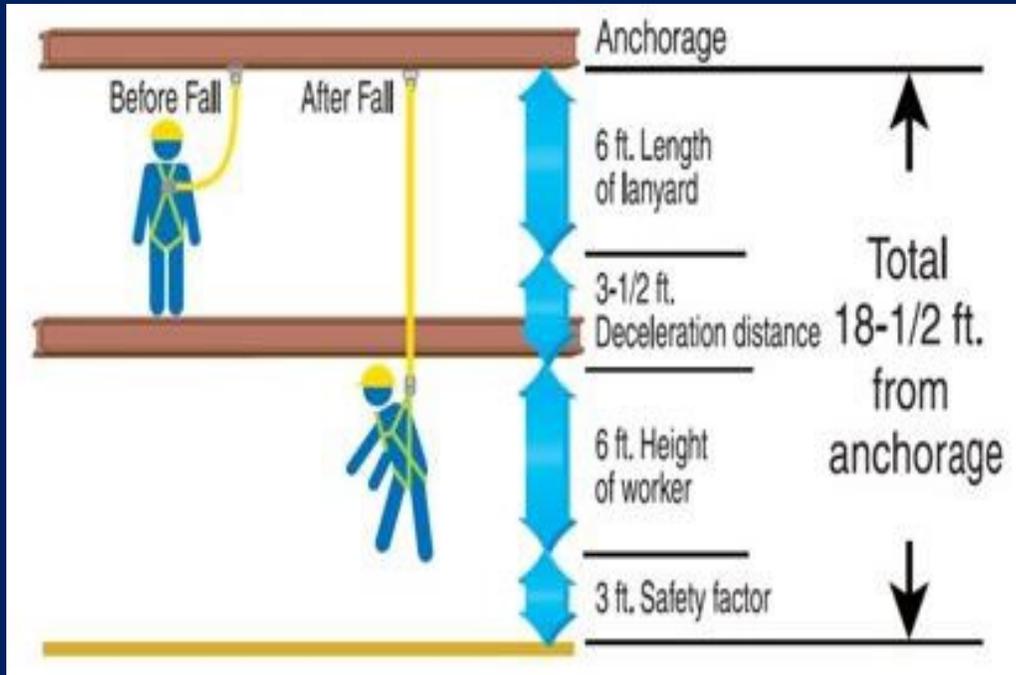


Personal Fall Arrest System



- Must be inspected prior to each use
- Attachment point to body harness shall be in center of wearer's back
- Limit fall to 6 feet and prevent contact with lower levels
- Maximum deceleration to 3.5 feet
- D-rings and snap hooks - 5000 lbs minimum tensile strength
- Self retracting lifelines and lanyards:
 - 2' fall distance - 3000 lbs tensile strength
 - greater than 2' - 5000- lbs tensile strength
- Anchorages must support at least 5000 lbs force

Calculate Fall Clearance

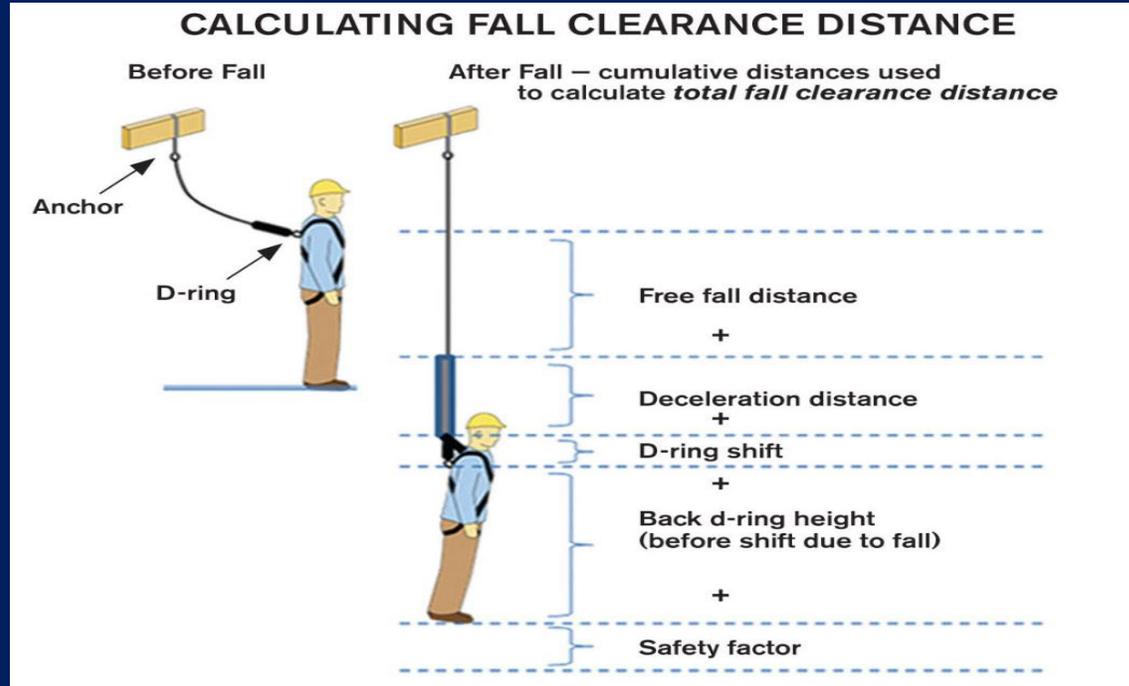


Shock absorbing lanyard

vs

Self-retracting lanyard

Calculate Fall Clearance



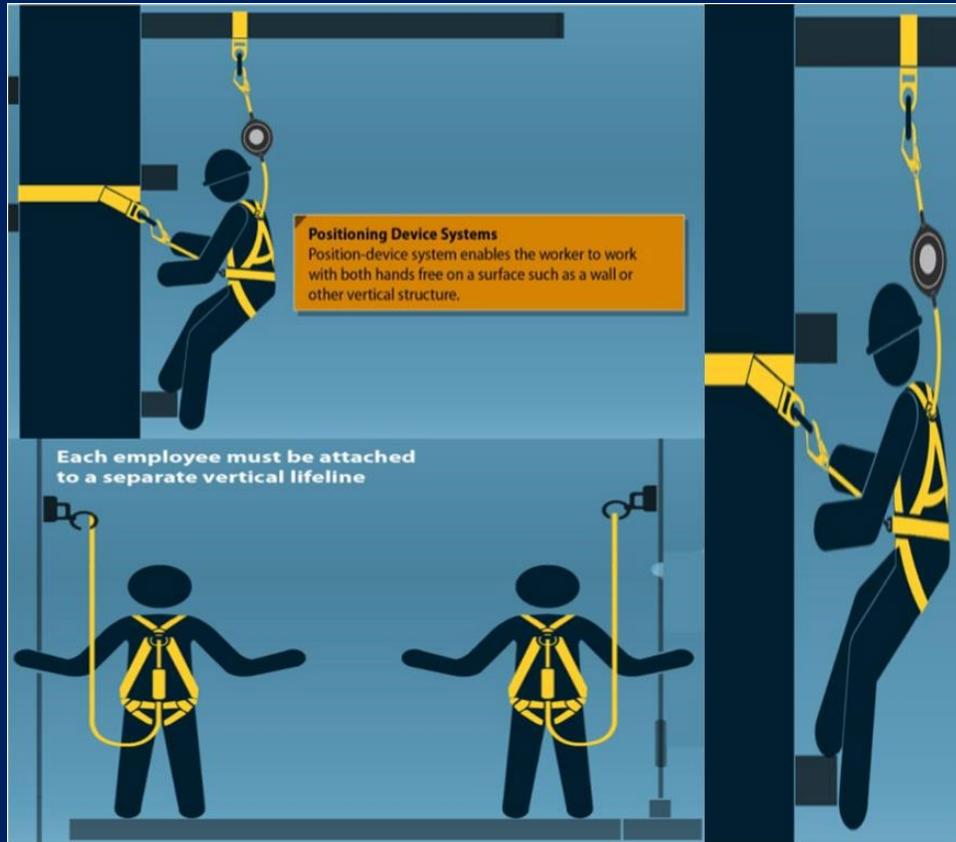
Clearance Distance	=	Free Fall Distance	+	Deceleration Distance (lanyard/lifeline stretch/elongation)	+	D-Ring Shift (harness slip)	+	Back D-Ring Height	+	Safety Factor
<i>Calculate</i>	=	<i>See chart below</i>	+	<i>Assume 3.5 feet*</i>	+	<i>Assume 1 foot*</i>	+	<i>Assume 5 feet*</i>	+	<i>Typically 2 feet</i>

Fall Restraint System



- Fall restraint systems prevent the user from falling any distance
- Consider the force that would be generated by the worker walking, leaning, or sliding down the working surface
- At a minimum, fall restraint systems should have the capacity to withstand at least 3,000 pounds of force or twice the maximum expected force that is needed to restrain the worker from exposure to the fall hazard

Positioning Device Systems



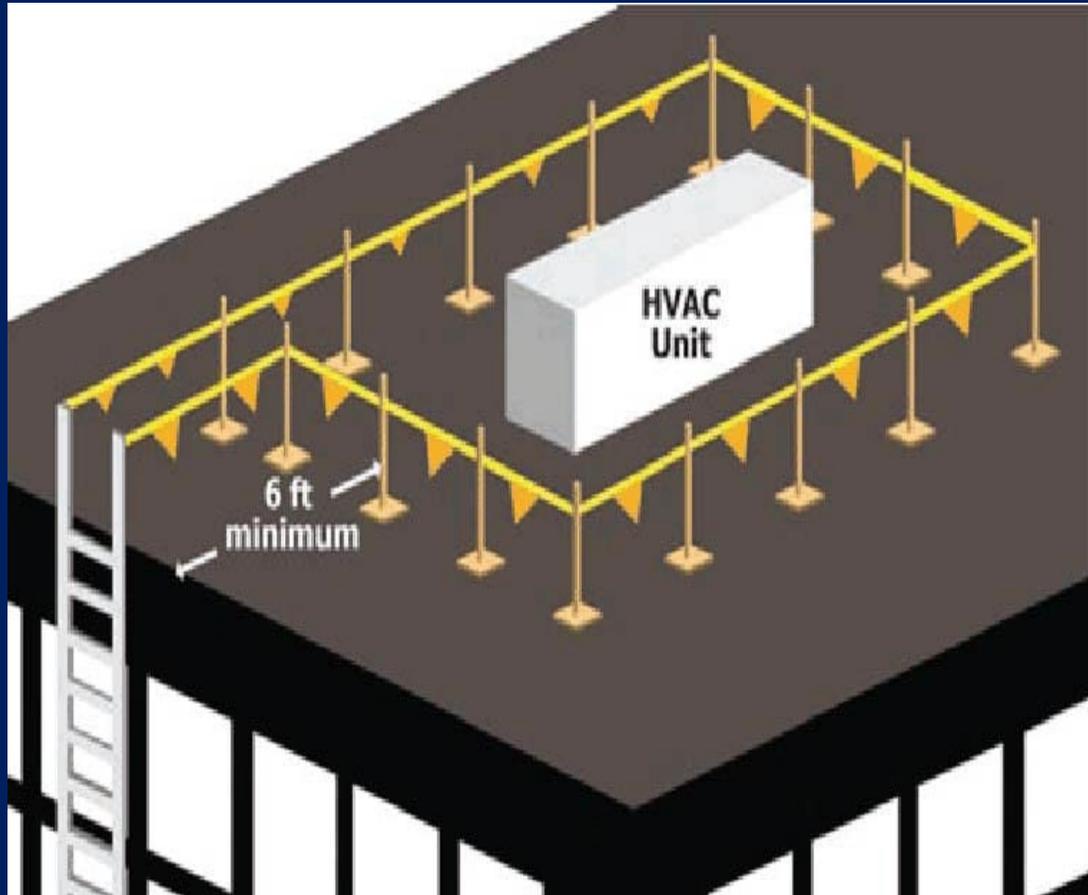
- A body belt or body harness rigged to allow a worker to be supported on an elevated vertical service
- Allow working with both hands free while leaning
- Limit free fall no farther than 2 feet
- Anchorage capable of supporting at least twice the impact load of a worker's load or 3000 lbs, whichever is greater
- Connecting assembly tensile strength of 5000 lbs (D-ring, snaphook)

Safety Net System



- Shall be provided when work surfaces are 25' above the ground or water or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts is impractical
- Operations shall not be undertaken until the net is in place and has been tested
- Shall extend 8 feet beyond the edge of the work surface
- Installed as close under the work surface as practical but in no case more than 25' below such work surface
- Mesh size of nets shall not exceed 6" by 6"
- 17,500 foot-pounds minimum impact resistance and must bear a label of proof test
- Edge ropes shall provide a minimum breaking strength of 5000 lbs
- Forged steel safety hooks or shackles shall be used to fasten the net to its supports
- Connections between net panels shall develop the full strength of the net

Warning Line System



- Warning lines shall consist of ropes, wires, or chains, and supporting stanchions
- Erected on all sides of roof work and flagged every 6'
- The warning line shall be erected not less than 6' (1.8 m) from the roof edge
- Not less than 10' (3.1 m) from the roof edge which is perpendicular to the direction of mechanical equipment operation
- Sag of no less than 34" (.9 m) and highest point of 39" from walking/working surface
- Capable of resisting, without tipping over, a force of at least 16 lbs (71 N) applied horizontally against the stanchion
- The rope, wire, or chain shall have a minimum tensile strength of 500 lbs

Controlled Access Zone



- Used to control access to areas where leading edge and other operations are taking place
- Authorized workers only
- Defined by control lines, barriers, markers
- Control lines are rope, wire, or tape
- Flagged at every 6' or less
- Lines 39" to 45" high
- Minimum breaking strength 200 lbs
- Must extend length of unprotected edge and be parallel with edge
- Must connect with guardrail system or wall
- Erected not less than 6' or not greater than 25' from the unprotected or leading edge, except when erecting precast concrete, than no greater than 60' from the leading edge

Safety Monitoring System

WARNING LINES SAFETY MONITOR



Requires a competent person who must:

- Warn employees when it appears employee is unaware of fall hazard or acting unsafely
- Be on the same working/walking surface
- Be within sight
- Be close enough to communicate orally with employees
- Have no other responsibilities that could distract from monitoring

Mitigating Fall Hazards



Walking/Working Surfaces integrity



Walking/Working Surfaces Integrity

The employer shall determine if the walking/working surfaces on which its employees are to work have the strength and structural integrity to support employees safely.

Employees shall be allowed to work on those surfaces only when the surfaces have the requisite strength and structural integrity [OSHA 1926.501(a)(2)].



Covers

- All other covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time [OSHA 1926.502 (i)(2)]
- All covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees [OSHA 1926.502(i)(3)].
- All covers shall be color coded, or they shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard [OSHA 1926.502(i)(3)].





Examples of What Not to Do







Implementation & Enforcement



Multiemployer Sites Accident Prevention and Safety Compliance

Procedures to be implemented:

- For the review and approval by the Contractor of the Subcontractors' Site Safety Plans and Job Hazard Analysis.
- For Subcontractors training on the Contractor's Site Safety Plan prior to commencement of work by each Subcontractor
- For communicating any revisions to the Contractor Site Safety Plan during construction and/or demolition work.



Multiemployer Sites Accident Prevention and Safety Compliance

Procedures to be implemented:

- For communicating site conditions, and existing and/or created safety and health hazards prior to the Subcontractor(s) commencing their work will be created and implemented.
- For communicating site conditions, and existing and/or created safety and health hazards between the Contractor and Subcontractors, and between Subcontractors for locations where construction or demolition work is performed simultaneously by different parties.



NYC DOB Revocation of Valor Consulting Course Provider Status

The NYC Department of Buildings (DOB) has issued a notice of intent to revoke Valor's Consulting status as a DOB approved safety training course provider for the construction industry professionals, and as a result any Site Safety Training (SST) cards issued by this company will be immediately invalidated.

This action by NYC DOB stems from an investigation of safety training course provider, Valor Consulting, conducted by the NYC Department of Investigations (DOI). As alleged in the indictments, while Valor Consulting purported to provide construction safety training, the school and its employees acted as a criminal enterprise, selling fraudulent certifications without providing training.

Since there are serious questions about the legitimacy of any Valor training certificates, DOB has disabled all of the more than 20,000 Valor SST cards in circulation, of which approximately 17,000 are currently active.

DDC Project Staff, CMs and contractors must ensure that any worker that received training from Valor Consulting, obtains legitimate SST training from a different approved course provider as soon as possible to avoid any interruptions in their ability to work.

An SST card can be scanned using a smart phone app, which will immediately inform the user whether an SST card is valid or not. Worker without a valid SST card must be turned away from the site. If a contractor allows a worker without a valid SST card to enter the work site, the contractor could be subject to enforcement actions from DOB.



Please visit the following links for additional information.

[NYC DOB Approved Course Providers](#)

[NYC DOB Site Safety Training](#)

THANK YOU

Office of Construction Safety