



2019 OECS Walking Working Surfaces



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Agenda

- Review updates to the standards: ladders, stairways, floor and wall openings
- Fixed Ladder updates after November 19, 2018
- Fall protection options
- Fall protection for roofing operations
- Scaffold safety
- Fall Protection inspections and documentation

Ladders

- Use at least one hand to grasp the ladder when climbing up and down it, and:
 - Don't carry anything in your hand while climbing.
- Ladders placed in locations such as passageways, doorways, or driveways need to be protected

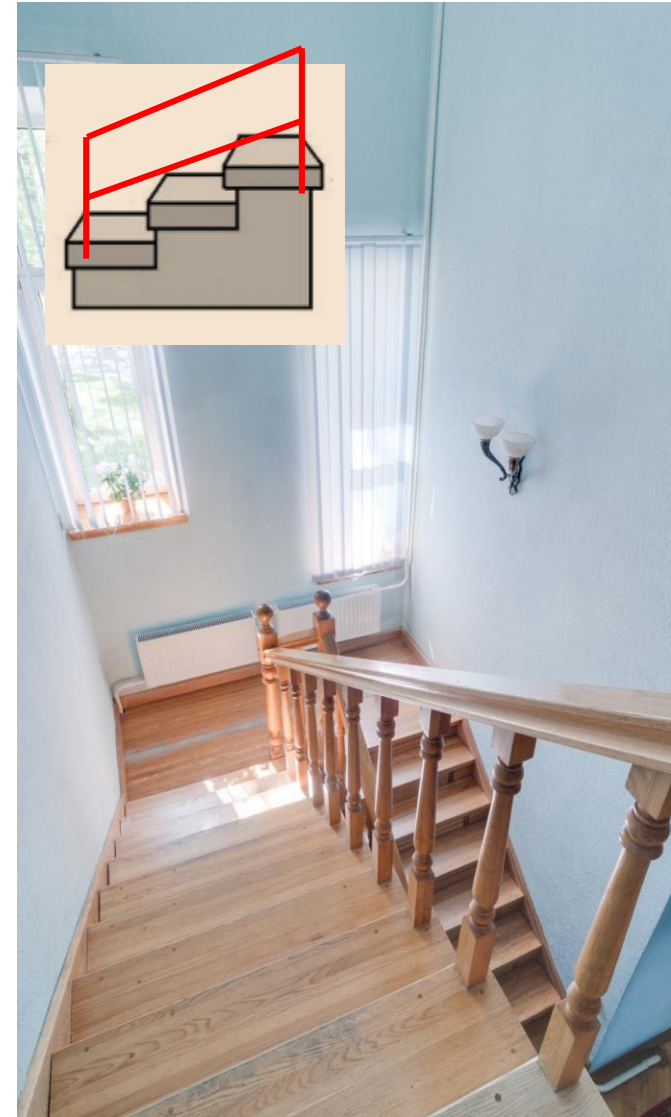


Ladders



Stairways

- When a door or a gate opens directly on a stairway, a platform is provided, and the swing of the door or gate does not reduce the platform's effective usable depth to:
 - Less than 20" if installed before January 17, 2017; and
 - Less than 22" if installed on/or after January 17, 2017
- Stairs with 3 treads or 4 risers must be equipped with stair-rails and/or handrails



Handrails and stair-rail systems

- **Openings in stair-rails:** No opening in a stair-rail system may exceed 19" at least dimension
- **Handhold:** Handrails must have the shape and dimension necessary so that employees can grasp the handrail firmly





Fall protection

Duty to Have Fall protection

- Does not apply to:
 - **“When employers are inspecting, investigating, or assessing workplace conditions or work to be performed prior to the start of work or after all work has been completed.”*
 - Portable ladders
 - Powered Platforms covered by 1910.66
 - Aerial Lifts covered by 1910.67



Fall Protection

- *Each employee on a walking working surface with an unprotected side or edge that is more than 4' above a lower level is protected by one of the following:
 - Guardrail systems
 - Safety net systems, or
 - Personal fall protection system, such as personal fall arrest, travel restraint, or positioning systems
- *When an employer can demonstrate that it is not feasible or creates a greater hazard to use the above, the employer must develop a fall protection plan that meets the requirements of 1926.502 (k) and the training requirements of 1926.503(a) and (c).



Infeasible or greater hazard

- When the employer can demonstrate that the use of fall protection systems is not feasible on the working side of a platform used at a loading rack, loading dock, or teeming platform, the work may be done without a fall protection system providing certain steps are followed:
 - The work operation for which fall protection is infeasible is in process;
 - Access to the platform is limited to authorized employees; and,
 - The authorized employees are trained in accordance with the standard

Hoist Areas

- Each employee in a hoist area is protected from falling 4 ' or more to a lower level by:
 - A guardrail system;
 - A personal fall arrest system; or
 - A travel restraint system.



Hoist Areas

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Holes

Holes

- Each employee must be protected from falling through any hole (including skylights) that is 4' or more above a lower level by one or more of the following:
 - Covers;
 - Guardrail systems;
 - Travel restraint systems; or
 - Personal fall arrest systems
- Each employee must be protected from tripping into or stepping into/through any hole that is less than 4' above a lower level by covers or guardrail systems



Must be marked with the word "HOLE" or "COVER"



Holes

Employees must be protected from falling into a stairway floor hole by a fixed guardrail system on all exposed sides, except at the stairway entrance



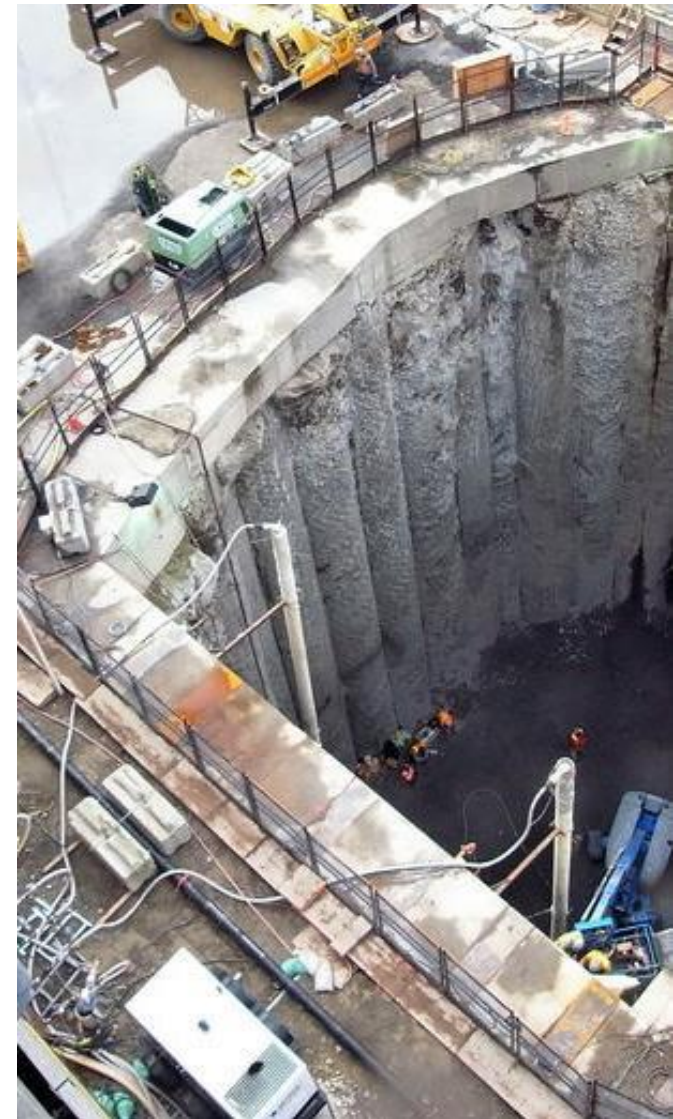
Access Points

Each employee must be protected from falling into a ladderway floor hole or ladderway platform hole by a guardrail system and toe-boards erected on all exposed sides, except at the entrance to the hole, where a self-closing gate or an offset must be used



Repair Pits, service pits, assy. pits <10' Deep

- The use of a fall protection system is not required for a repair pit, service pit, or assembly pit that is less than 10' deep, provided the employer:
 - Limits access within 6' of the edge of the pit to authorized employees that have been properly trained to recognize the hazard.
 - Apply floor markings at least 6' from the edge of the pit in colors that contrast with the surrounding area; or places a warning line at least 6' from the edge of the pit.
 - Posts readily visible caution signs that state "Caution-Open Pit."



What systems do you see?

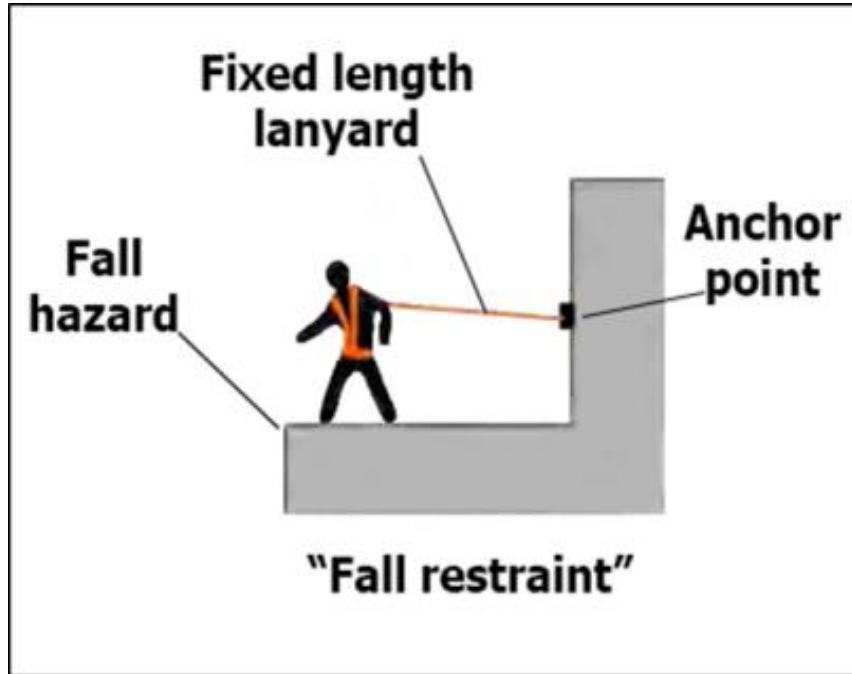


Additional Fall Protection Issues



Donning and Inspection

Fall Hazard Controls



Prevent the fall – personal fall restraint

- Prevent falls by keeping worker from reaching fall hazard
- Comprised of a body harness, an anchorage, connectors
- Often used when section of guardrail or hole cover is temporarily removed

Training

- Before any employee is exposed to a fall hazard, training must be completed for each employee who uses personal fall protection systems or who is required to be trained as specified elsewhere in the standard. Training must be completed before May 17, 2017
- The employer must train each employee on or before May 17, 2017 in the proper care, inspection, storage, and use of equipment covered by this subpart before an employee uses the equipment
- Retraining required if changes in workplace, types of fall protection equipment, or if employee shows lack of knowledge. Is not required annually



Training

- Must provide information and training in a manner the employee understands
- Must be documented





Fixed Ladders

Fixed Ladders >24' from lower level

Existing fixed ladders:

- Each fixed ladder installed before November 19, 2018 is equipped with a personal fall arrest system, ladder safety system, cage, or well;

New fixed ladders:

- Each fixed ladder installed on and after November 19, 2018, is equipped with a personal fall arrest system or a ladder safety system;



Fixed Ladders >24' from lower level

Replacement:

- When a fixed ladder, cage, or well, or any portion of a section thereof, is replaced, a personal fall arrest system or ladder safety system is installed in at least that section of the fixed ladder, cage, or well where the replacement is located

Deadline:

- On and after November 18, 2036, all fixed ladders must be equipped with a personal fall arrest system or a ladder safety system. Cannot depend on cages for fall protection after that date



Low Slope Roofs

Low Slope Roofs

When closer to edge than 6' employee must be protected from falling by:

- Guardrail systems
- Safety net systems
- Travel restraint systems, or
- Personal fall arrest systems



Low sloped roofs

- When work is performed at least 6' but less than 15' from roof edge employee must be protected by:
 - Guardrail systems
 - Safety net systems
 - Travel restraint systems, or
 - Personal fall arrest systems, or
- The employer may use a designated area when performing work that is both infrequent and temporary



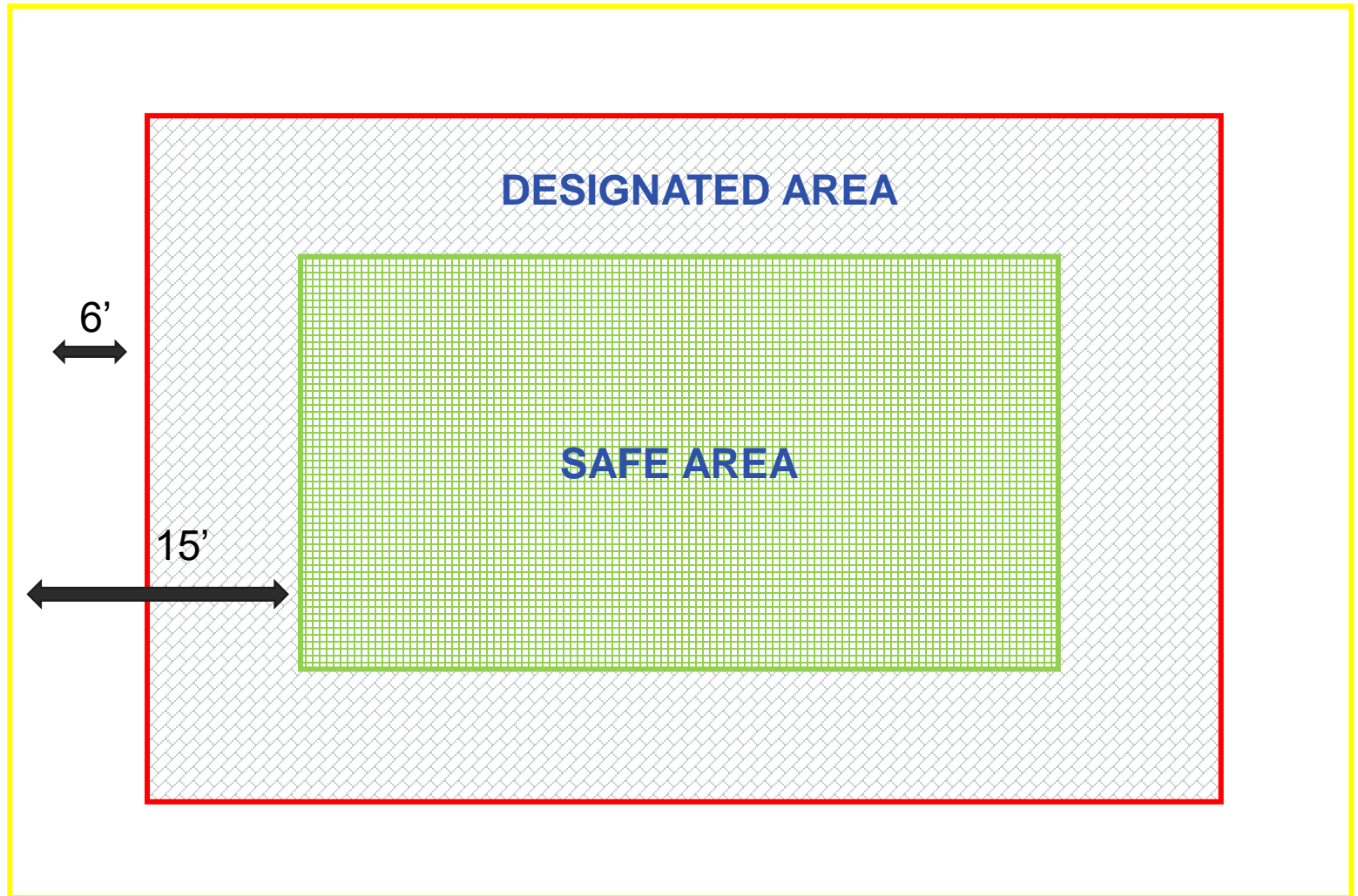
Designated Areas

- The perimeter must be identified with warning line
- Must have a breaking strength of 200#
- Does not sag below 34” nor be higher than 39”
- Must be clearly visible from 25’
- Is erected not less than 6’ from edge for temporary and infrequent work, or less than 15’ from edge for other work.
- Similar to Construction requirements



Designated Areas

Roof Edge



Low sloped roofs

- When work performed is 15' or more from roof edge employee must be protected by:
- Guardrail systems
- Safety net systems
- Travel restraint systems, or
- Personal fall arrest systems, or
- Designated area
- The employer is not required to provide any fall protection, provided work is both infrequent and temporary and:
- The employer implements a work rule prohibiting employees from going within 15' of roof edge without using fall protection

Guardrails

- Top-rail height changed from 42" to 42" +/- 3".
- If no wall or parapet at least 21" high;
- Mid-rails must be installed
- Intermediate vertical members (posts) installed no more than 19" apart



Scaffolding Safety

Scaffolding

- Fall protection on scaffolding must comply with 1926 Subpart L
 - Fall exposures from a scaffold must be protected if the employee is exposed to a fall hazard in excess of 10' to the lower level
- All scaffolding must be erected by a competent person and designed by a qualified person.



Scaffold Safety

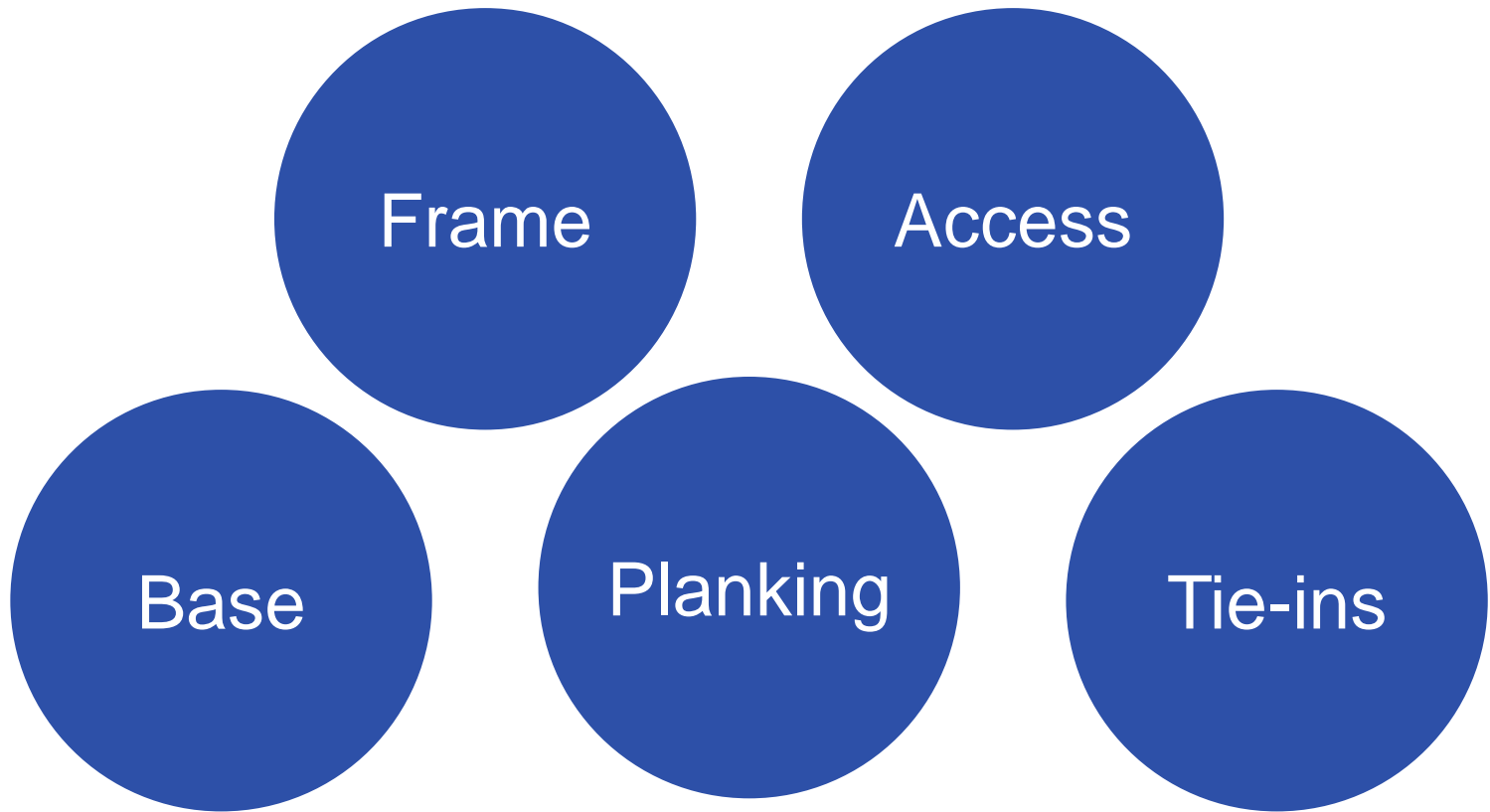
- Scaffold must be designed by a qualified person
- Scaffold must be erected/dismantled under supervision of a competent person



Scaffold Safety

- Fall protection height on scaffolds?
 - >10 feet (unless on Suspension, Aerial Lifts or if required by site specific)
- Means of fall protection on scaffolds?
 - Depends on scaffold
- Set-Up Requirements
 - Base
 - Frame / Poles / Ladders
 - Platform
 - Guardrails
- Daily Inspection and Maintenance is important

Scaffold Safety – Set-Up





Base

Base

- Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates and mud sills (or other adequate firm foundation). The size of the mud sill shall be based on the type of soil the scaffold will be erected upon.
- Must be erected stable
- Means mud sills and base plates nailed together





Frame

Frame

- Supported scaffold poles, legs, posts, frames, and uprights shall be plumb (i.e. perfectly vertical) and braced to prevent swaying and displacement. Cross-bracing is required on both front and back sides of each scaffold buck or frame
- **Inspect daily** for damage
- Install “X” braces as soon as possible
- Make sure plumb and level

Planking/ Decking

Planking / Decking

- Scaffolds must be fully planked or decked whenever possible. The space between the last plank and the uprights cannot exceed 9 1/2 inches. The space between planks cannot exceed 1 inch, except where necessary for obstructions.
- Platforms and walkways, in general, must be at least 18 inches wide.
- The ends of each platform must be cleated or restrained, or must extend at least 6 inches over the centerline of the support.



Access

- Where the frame of the scaffold will be used for access, the manufacturer must specify in writing that it was designed for such purposes. Design features include a rest platform every 35 feet, rungs at least 11 1/2 inches wide (8 inches for ladders built into the frame), and uniform rung spacing not exceeding 16 3/4 inches.
- First step within 24”



Tie-Ins

Scaffolds with a height-to-base width ratio of more than four to one shall be restrained from tipping over by guying, tying, bracing, or equivalent means. Guys, ties and braces shall be installed where horizontal members support both inner and outer legs.



Tie-Ins

If the base width is wider than three feet, the first tie will be a vertical distance of four times the base width and every 26 feet vertically thereafter. For example, if the base width is 5 feet, the first vertical tie will be (5 feet x 4) 20 feet from the ground.

Tie-Ins

For long (running) scaffolds, guys, ties, and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet.



Summary

- Allows use of Construction processes and tolerances for fall protection
- Makes it more flexible for the employer
- Revises fixed metal ladder requirements
- Includes performance dates (training)

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Thank you

