



Residential fall protection

*Presented by
Minnesota OSHA*



Fall protection

29 CFR 1926

Subpart M

1926.501(b)(13) –

Residential construction

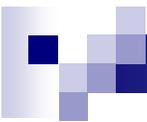
policy changes

effective June 16, 2011



Residential construction policy changes – overview

- On Dec. 22, 2010, federal OSHA issued STD 03-11-002, Compliance Guidance in Residential Construction.



Residential construction policy changes – overview

- The directive rescinded STD 03-00-001, Interim Fall Protection Compliance Guidelines for Residential Construction, which allowed employers to use alternative methods for fall protection without demonstrating the infeasibility of conventional fall protection.



Residential construction policy changes - overview

- The change in the policy will take effect **June 16, 2011**.
- Residential construction employers must comply with 29 CFR 1926.501(b)(13).



Objectives

- Explain the change in residential construction fall protection policy.
- List the requirements employers must meet.



Objectives

- Discuss the definition of residential construction included in STD 03-11-002.
- Explain the citation policy that enforcement personnel must use in the event of a violation of 29 CFR 1926.501(b)(13), the residential construction standard.



Changes in policy

- Recommendations to rescind the directive from:
 - Advisory Committee on Construction Safety and Health
 - National Association of Homebuilders
 - Occupational Safety and Health State Plan Association



Changes in policy (continued)

- OSHA issued STD 03-11-002
 - Directive rescinds STD 03-00-001
 - Requires employers to comply with 29 CFR 1926.501(b)(13)



Changes in policy (continued)

- Employers must:
 - provide fall protection by using –
 - guardrail systems
 - safety net system
 - personal fall arrest systems
 - other fall protection methods listed in 29 CFR 1926.501(b).



Changes in policy (continued)

- Fall restraint systems are acceptable
- Non-Subpart M work methods:
 - scaffolds
 - ladders
 - aerial lifts
 - must comply with appropriate subparts when using these methods



Changes in policy (continued)

- 1926.501(b)(13), employers that do not provide conventional fall protection must:
 - demonstrate the conventional fall protection is infeasible;
 - prepare a fall protection plan in accordance with 29 CFR 1926.502(k), which must be in writing.



Changes in policy (continued)

- **The fall protection plan must meet 19266.502(k):**
 - prepared by a qualified person**
 - written**
 - site-specific**



Changes in policy (continued)

- **The fall protection plan:**
 - **must be up to date**
 - **must have changes approved by the qualified person**
 - **must be maintained on site**



Changes in policy (continued)

- **The fall protection plan:**
 - **implementation supervised by a competent person**
 - **document why conventional fall protection is infeasible or creates a greater hazard**



Changes in policy (continued)

- **The fall protection plan must:**
 - **discuss the alternative measures taken to protect workers from falls hazards**
 - **identify each location where conventional fall protection cannot be used**



Changes in policy (continued)

■ **The fall protection plan:**

- **if no other alternative measures are used, the employer must use a safety monitor in a controlled access zone**
- **must identify workers designated to work in controlled access zone**
- **if incident occurs, employer must re-examine its fall protection plan**



Definition of residential construction

Structure must meet the following requirements

- **Residence requirement: The end-use of the structure being built must be as a home (i.e., a dwelling); and**



Definition of residential construction

Structure must meet the following requirements

- **Wood frame construction requirement:**
The structure being built must be constructed using traditional wood frame construction materials and methods.



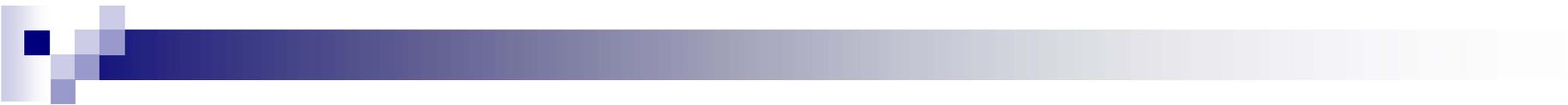
Residential construction

Cold-formed metal studs will be considered within the bounds of traditional wood frame construction materials and methods.



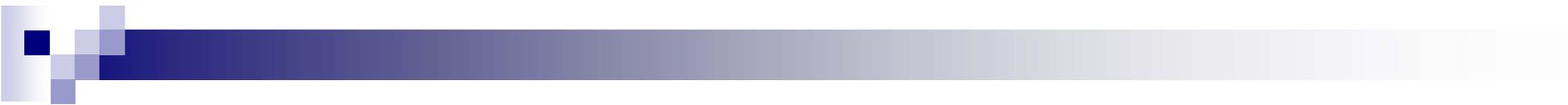
Residential construction (continued)

The construction of residences (homes) built with wood framed and masonry (brick or block walls) will be considered to meet the wood frame construction requirements.



Nursing homes, hotels and similar facilities

- In most cases, nursing homes, hotels and similar structures will not be considered residential construction.
- These structures usually include materials not used in wood framed construction.



Nursing homes, hotels and similar facilities (continued)

- In most cases, the OSHI should be able to determine if a nursing home, hotel or similar facility meets the definition of residential construction.
- However, if it is difficult for the OSHI to make that determination, he or she should contact their supervisor.



Nursing homes, hotels and similar facilities (continued)

- Examples of materials that disqualify a structure from being residential construction:
 - precast concrete
 - steel I-beams (beyond the use of a single I-beam used in conjunction with wood framing)
 - rebar and poured concrete when integral to the *frame* of the structure

Changes in policy (continued)

In addition, the construction of a discrete part of a large commercial building (not the entire building) will not *fit within the definition of residential construction.*





Citation policy

- MNOSHA will begin enforcement activities on:

June 16, 2011



Citation policy (continued)

- 1926.501(b)(13) is violated when an employee engaged in residential construction activities six feet or more above lower levels is not protected by at least one of the following:
 - guardrail system
 - safety net system
 - other fall protection allowed under 1926.501(b)



Citation policy (continued)

■ **Unless:**

- the employer demonstrates the use of the above methods is infeasible or creates a greater hazard; and
- develops and implements a fall protection plan that meets the requirements of 1926.502(k).

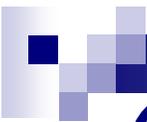
The six-foot rule is measured from the employee's working level to the level below the employee regardless of what the level is called.





Citation policy (continued)

- Citations issued for 1926.501(b)(13) will be issued for the specific standard violated and grouped with 1926.501(b)(13).



Citation policy (continued)

- Examples are as follows:
 - 1926.501(b)(4) – hole;
 - 1926.501(b)(10) – roofing work on low sloped roofs;
 - 1926.501(b)(11) – roofing work on steep roofs;
 - 1926.501(b)(14) – wall openings.



Citation policy (continued)

If the employer demonstrates the use of conventional fall protection is infeasible or creates a greater hazard, the OSHI must determine whether the employer has implemented a fall protection plan meeting the requirements of 1926.502(k).



Citation policy (continued)

- Note: Fall protection plan
 - Cost will not be considered as an item to prove it is infeasible.
 - What could be a greater hazard than falling, which could result in a fatality or serious injury?



Citation policy (continued)

- Fall protection plans under 1926.502(k) must be in writing, site-specific and maintained on site.



Citation policy (continued)

- If the plan is not written, not site-specific, not maintained on site or otherwise violates 1926.502(k), a citation for violation of the appropriate provision in 1926.501(b) should be issued and rated according to the citation rating guide (CRG).



Citation policy (continued)

A plan developed for repetitive use for a particular style or model home may be considered site-specific if it meets all of the requirements.



1926.502(k) Fall protection plan

A sample fall protection plan is included in Appendix E to Subpart M



1926.503

Training requirements

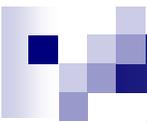
***Training program:* The following training provisions supplement and clarify the requirements of 1926.21 regarding the hazards addressed in Subpart M.**



1926.503(a)(1)

Training requirements

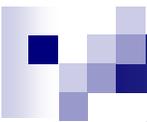
- The employer must provide a training program for each employee who might be exposed to fall hazards, by a competent person.



1926.503(a)(1)

Training requirements

- The training program must:
 - enable each employee to recognize the hazards of falling; and
 - train each employee in the procedures to be followed to minimize these hazards.



1926.503(a)(1)

Training requirements

- The training program must:
 - specify the use and operation of guardrails, PFAS, safety net systems, controlled access zones and other protection to be used;
 - explain the role of the employees in the fall protection plans;
 - meet the standards contained in this subpart.

Training program

Trained in the use of:

- guardrail systems;**
- personal fall arrest systems;**
- safety net systems;**
- warning line systems;**
- safety monitoring systems;**
- controlled access zones.**



Training program



- The role of the employee in the safety monitoring system
- Limitations of mechanical equipment when working on low sloped roofs
- Procedures for handling and storage of equipment and materials
- The role of the employee in the fall protection plan
- The standards contained in this subpart

1926.503(b)

Training requirements

■ ***Certification of training***

- The employer must maintain a **written certification** that will include the:
 - **name** of employee trained;
 - **date** of training;
 - **signature** of the person conducting the training, or the employer, and their qualifications.
- The **date** of prior training, if used.

- The training records certification must be maintained.



1926.503(c)

Training requirements

Retraining: If the employer believes employee does not understand his or her training, the employer shall retrain this employee.



1926.503(c)

Training requirements

- **Changes in the workplace**
- **Changes in the protective system or equipment**
- **Inadequacies in the employees knowledge, systems used or equipment**



Information at www.osha.gov

- Top links – construction
- Residential fall protection
 - Residential fall protection directive
 - *Federal Register* notice
 - Questions and answers
 - News release
 - Fact sheet
 - *Guidance Document on Fall Protection in Residential Construction*

Installing roof trusses

Numerous methods can be used to prevent fall-related injuries and fatalities among workers installing roof trusses.

Bracket scaffold

A bracket scaffold can be placed on the interior or exterior of a structure. When bracket scaffolds are used on the interior of the structure, the exterior wall can limit employee exposures to fall hazards.



A worker installing roof trusses from an interior bracket scaffold.

Exterior bracket scaffolds

Exterior bracket scaffolds can also be used for installing roof trusses and other rooftop construction activities.



Workers using an exterior bracket scaffold to install roof trusses.

Ladders

Platform ladders and step ladders can provide a stable, elevated platform from which to work.

Platform ladders can be set up inside a structure and used to install roof trusses.



Anchors

A spreader braces the trusses and distributes arrest forces across several trusses. Spreaders can act as anchors for personal fall arrest systems and fall restraint. They can be reused according to the manufacturer's instructions. It is important to refer to the truss manufacturer's instructions and have a qualified person determine if trusses will meet strength requirements for a personal fall arrest system or fall restraint system.



An example of a spreader attached to roof trusses.



Installing ridge poles and rafters

Although the use of roof trusses is nearly universal, some builders still frame roof systems with ridge poles and rafters. While performing this task, workers need to be protected from falls.

Anchors

Employees installing ridge poles and rafters can use strap anchors and bolt-on anchors. Both anchors can be removed and reused according to the manufacturer's instructions.

Strap anchors providing anchorage for three personal fall arrest systems.



A bolt-on anchor attached to a rafter.

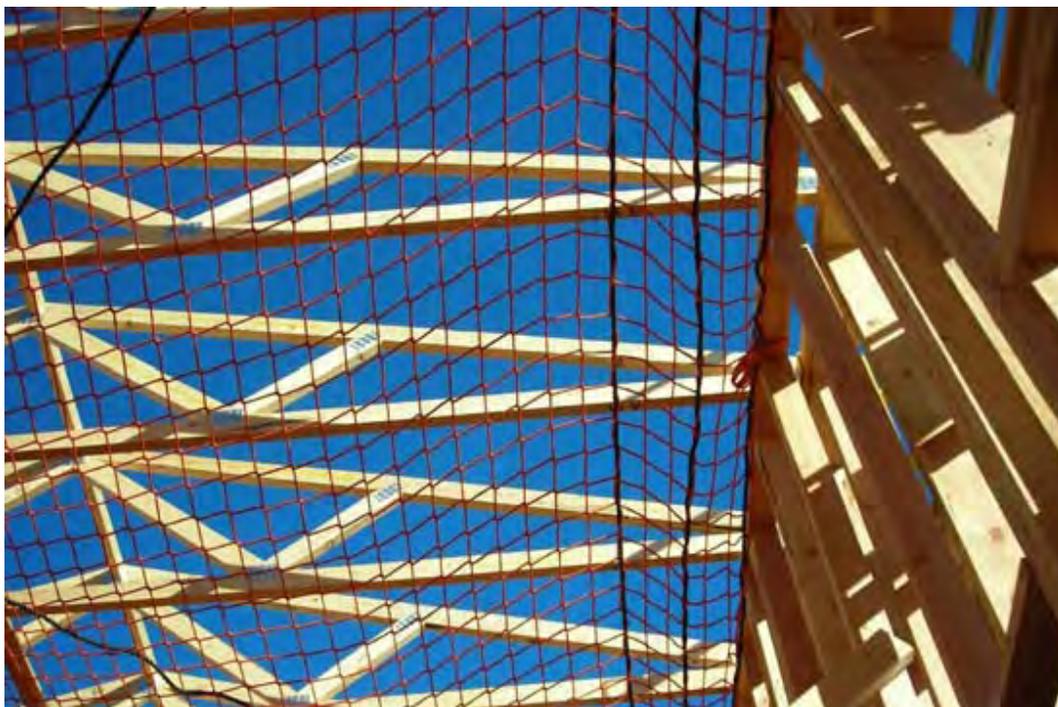


Installing roof sheathing

After a roof has been framed, roof sheathing operations can begin. There are serious fall hazards associated with this activity, but there are a number of ways to protect workers.

Safety net system

Safety net systems can be used as fall protection for workers installing roof sheathing.



An example of a safety net system.

Roofing – weatherproofing

As with other roofing activities, fall protection is critical for this type of work.



Anchors

Anchors and retractable lifeline stands can be used by workers installing roof sheathing.



Anchors that can be used while performing roof sheathing operations.

Anchors

Permanent anchors can be installed during roofing operations and left in place after construction is complete. They can provide an anchorage point during the life of the roof. Reusable anchors can also be used while weatherproofing a roof. It is important to inspect these anchors prior to use.

Permanent anchors on completed roofs.





A worker using a reusable anchor with a retractable lifeline.



Sheathing walls

Although it is common for sheathing to be included on panelized walls used in residential construction, sheathing still takes place on residential construction sites. Erecting the walls by lifting devices or jacks can lessen a worker's exposure to fall hazards.

Scaffolds

Welded end frame (X brace) scaffolds (such as tube/coupler and systems scaffolds) stand on their own. With proper bracing, the frames can be stacked from cellar hole to chimney top. Like other scaffolds, these can make stable work platforms for many residential construction operations. These stand-alone scaffolds can be used for sheathing and various other vertical wall operations, such as masonry wall construction, siding and stucco application.

Foundation walls and formwork

In most residential construction, concrete or masonry block is used to create the foundation and the foundation walls of a structure. The concrete is usually poured into an excavation to create the foundation and the foundation walls.

Anchors can be added to cured concrete. Anchors with expandable bolts can be placed in holes that have been drilled into the concrete.



Foundation walls and formwork

In most residential construction, concrete or masonry block is used to create the foundation and the foundation walls of a structure. The concrete is usually poured into an excavation to create the foundation and the foundation walls.

Scaffolds can provide elevated work surfaces for workers performing foundation work.



Installing floor joists and floor trusses



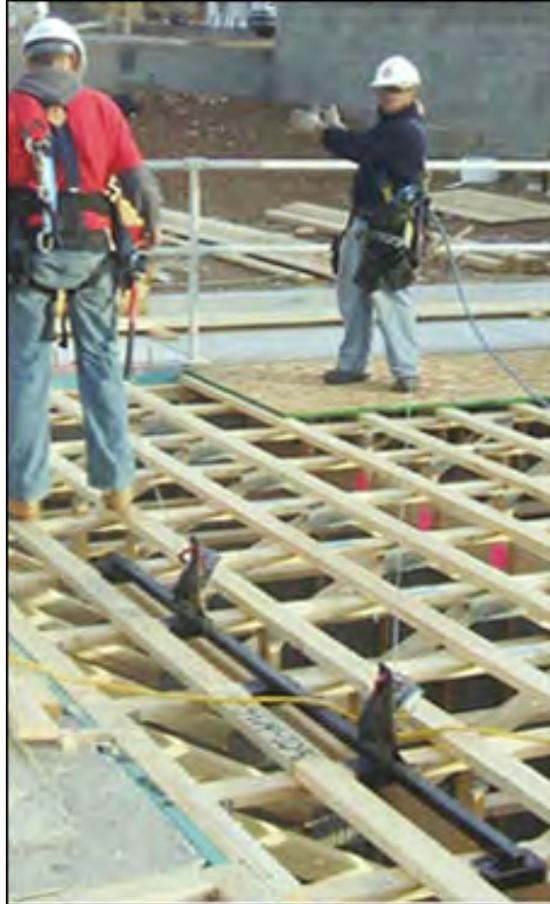
A retractable lifeline attached to a floor truss anchor.

Foundation walls and formwork



A retractable lifeline attached to a floor truss anchor.

Installing subfloors



Workers using a truss bracket anchor while installing a subfloor.

Exterior finishing

The exterior finishing phase of residential construction includes a number of activities, such as installing windows, doors, siding and gutters. Many of these tasks pose fall hazards.

Aerial lifts

Aerial lifts can be ideal equipment for exterior finishing.





Ladders

Ladders can provide access to areas of a structure where exterior finishing work will occur.

Scaffolds

Pump jack scaffolds consist of a platform supported by moveable brackets on vertical poles. Pump jacks are appealing for certain applications because they are easily adjusted to variable heights and are relatively inexpensive. They can include a material shelf for carrying supplies and tools.











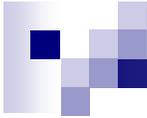






17 3:13PM







DANGER - KEEP OUT!

CAZ
CONTROLLED
ACCESS
ZONE

-AUTHORIZED PERSONNEL ONLY-



Questions and Answers

Q. Which OSHA Standards address fall protection in construction?

A. 29 CFR Part 1926, Subpart M.

Q. Which are the Subpart M requirements for residential construction?

A. 29 CFR 1926.501(b)(13).

Q. What is residential construction?

A. Consists of two elements.

Q. What are the two elements?

A. End use –dwelling and Construction type – traditional wood frame.

Q. When will residential employers that were covered by STD 03-00-001 have to start complying with 1926.501(b)(13)?

A. June 16, 2011.

Q. Can Safety Monitors be used?

A. Yes, under 1926.501(b)(10). Low sloped roofs in conjunction with warning lines. Roofs less than 50' wide Monitor alone can be used.

Q. Are there requirements for safety monitors?

A. 29 CFR 1926.502(h).

Q. Can Slideguards, kickboards, toeguards be used?

A. Slideguards cannot simply be used in lieu of conventional fall protection methods.

Q. Can an employer use a fall protection plan?

A. The employer first must demonstrate that it is infeasible or presents a greater hazard to use conventional protection methods.

Q. What requirements must a Fall Protection Plan meet?

A. 29 CFR 1926.502(k). Must be in writing and site specific.



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