

# 7. Fall Protection Plan

## Overview

This section discusses the following topics:

- General Guidelines
- Infeasible Fall Protection Systems
- Fall Protection Systems Used at Job Site
- Installation of Telecommunications Equipment and Materials

FairPoint Communications, Inc. designed a fall protection plan for all overhead installation and repair work to reduce or eliminate employee risk to fall hazards. This fall protection plan is effective on all required job site conditions.

## References

OSHA Standard 29 CFR 1926.053(b)(1)  
OSHA Standard 29 CFR 1926.451  
OSHA Standard 29 CFR 1926.451(c)(12), (d)(7)  
OSHA Standard 29 CFR 1926.502(k)  
OSHA Standard 29 CFR 1926.1050 to 1060  
OSHA Standard 29 CFR 1926.1053(b)(22)

## General Guidelines

FairPoint Communications, Inc. is dedicated to the protection of its employees from on-the-job injuries. All employees have the responsibility to work safely on the job. The purpose of this plan is to supplement the existing safety and health program and to ensure every employee recognizes workplace fall hazards and takes appropriate measures outlined in the plan to address those hazards.

This plan is designed to enable employees to recognize fall hazards associated with projects and to establish the safest procedures to prevent falls to lower

levels or through holes and openings in walking and working surfaces. This plan also seeks to minimize the amount of time an employee is exposed to a fall hazard.

It is the responsibility of all employees to understand and adhere to the procedures of this plan and to follow supervisor instructions. FairPoint Risk Management must approve any changes to the Fall Protection Plan.

Employees are trained and must adhere to this program so each employee is protected from falling 6 feet or more to a lower level when working in areas with unprotected sides and edges, leading edges, holes, hoist areas, ramps, runways, other walkways, excavations, dangerous equipment, overhand bricklaying and related work, residential construction, wall openings, falling objects, and any other walking/working surfaces not addressed.

This protection can take the form of guardrail systems, safety net systems, or personal fall arrest systems.

The following is discussed as it relates to the fall protection plan:

- Fall Protection Plan Training Overview
- Alternative Work Practices
- Supervisor Responsibilities

## **Fall Protection Plan Training Overview**

FairPoint Communications, Inc. incorporates on-the-job training as part of fall protection training. Employees are trained on the procedures described in this plan and must strictly adhere to them, except in situations where they are exposed to greater hazards.

If an employee believes he/she is subjected to a greater hazard by complying with the policy, the employee must notify the supervisor and address the concern before proceeding with the task. It is also the responsibility of all employees to bring to the employer's attention any unsafe or hazardous conditions or practices that may cause injury to either themselves or other employees.

After completing the training, a copy of the fall protection training verification is retained in the employee's personnel file. Retraining may be required if the following occurs:

- Changes in the workplace which render previous training obsolete
- Changes in type of fall protection systems or equipment used
- Inadequacies in an employee's knowledge or use of fall protection systems or equipment that indicate the employee has not retained the requisite understanding or skill

Employees who complete fall protection training are qualified to complete the tasks identified in this plan and are authorized to enter controlled access zones.

## **Alternative Work Practices**

It is sometimes infeasible or creates a greater hazard to use designated fall protection systems on residential and commercial structures. This is more fully addressed in the following sections and may include, but is not limited to:

- Installation of telecommunications equipment
- Installation of telecommunications materials

In the above situations, designated fall protection systems may not be feasible or the safest choice for employees so FairPoint Communications, Inc. implemented an alternative fall protection plan described in this section pursuant to OSHA Standard **29 CFR 1926.502(k)**. The plan identifies alternative work practices such as ladders, slide guards, guardrails, sawhorses, personal fall arrest systems, controlled access zones, truss webs and chords to support, and minimizing an employee's exposure time.

Moreover, FairPoint Communications, Inc. is not required to use more than one fall protection system for a particular phase of construction and if the alternative fall protection system is appropriately initiated for a task, such as installing telecommunications equipment, it may be used until the task is complete. The practices and procedures described in this plan apply only at heights of six (6) feet or more.

## **Supervisor Responsibilities**

It is the responsibility of the supervisor to:

- Supervise the fall protection plan
- Assign the most experienced or qualified individuals to complete certain tasks
- Designate a controlled access zone if alternative work practices are used
- Conduct ongoing safety checks of work operations
- Enforce the safety policy and procedures
- Correct any unsafe practices or conditions immediately

## **Infeasible Fall Protection Systems**

Although most commercial trades and some residential trades are able to comply with designated fall protection methods, it is infeasible or creates a greater hazard to comply with designated fall protection methods in some commercial and residential work involving installation of telecommunications equipment and related materials. As described below, fall protection methods such as personal fall arrest systems, safety net systems, guardrail systems, and scaffolds are generally either not feasible or subject employees to a greater hazard.

The requirements, use, and infeasibility of the following fall protection systems are described:

- Personal Fall Arrest Systems
- Safety Net Systems
- Guardrail Systems
- Scaffolds

## **Personal Fall Arrest Systems**

### **Requirements**

Personal fall arrest systems must meet the following requirements:

1. Personal fall arrest systems must be rigged in such a manner that an employee can neither free fall more than six feet nor contact any lower level.
2. Anchorage points for personal fall arrest systems must be independent of any anchorage used to support or suspend platforms and must be capable of supporting at least 5,000 pounds, along with maintaining a safety factor of at least two.
3. Anchorage points should not be attached to the truss or roof unless approved by a registered engineer to ensure FairPoint Communications, Inc. is in compliance with the fall protection standard, and to ensure employees are not subject to a greater hazard and the roof does not become damaged.
4. If anchorage points are already installed on the roof, a personal fall arrest system should be used only if the anchorage points and personal fall arrest system satisfy the technical requirements of the fall protection standard.

### **Infeasibility**

Personal fall arrest systems are not feasible and create a greater hazard for telecommunications work performed inside a structure for the following reasons:

1. The limited space available inside a structure precludes being able to properly install a fall protection system.
2. Telecommunications work generally involves short-duration tasks performed in one specific location. Workers complete a task and move to a new location to complete another task. Repeatedly reinstalling the personal fall arrest system, as the location of tasks moves, subjects employees to overexertion, and increases their exposure time to a fall hazard. Accordingly, personal fall arrest systems are not used for short-duration tasks requiring 30 minutes or less.
3. Telecommunications work is generally performed inside a structure at the same time other trades are working inside the structure. The installation and use of a personal fall arrest system while other workers are in close proximity impedes the ability to safely use the system, thereby subjecting employees, as well as other workers, to a greater hazard.

## Safety Net Systems

### Requirements

Safety net systems must meet the following requirements:

1. Each safety net must have a border rope for webbing with a minimum breaking strength of 500 pounds.
2. Each safety net must be installed with sufficient clearance to prevent employee contact with surfaces or structures below when subjected to an impact force equal to the drop test.

### Use

For telecommunications work, and as verified by a registered engineer, safety net systems are **only** used when:

1. The net can withstand a minimum of 5,000 pounds.
2. The net can be installed with sufficient clearance to prevent employee contact with surfaces or structures below.
3. Employees are not subjected to overexertion or a greater fall hazard exposure time to install and reinstall the net throughout the site.

In all other cases, the use of safety net systems in construction is infeasible and subjects employees to a greater hazard.

## Guardrail Systems

### Requirements

Guardrail systems must meet the following requirements:

1. The top edge height of top rails of guardrail systems generally must be 42 inches above the walking or working surface.
2. Mid rails must be installed between the top edge and the surface when there is no wall or parapet at least 21 inches high.
3. Guardrail systems must be capable of withstanding, without failure, a force applied in any downward or outward direction of at least 200 pounds.

## Use

Guardrail systems may be used during some phases of commercial and residential telecommunications work. For example, guardrails should be used at unfinished or temporary wall openings and stairwells. However, temporarily braced exterior or interior walls are not capable of withstanding the force requirements of guardrail systems. In no case are guardrail systems considered feasible when anchored to temporarily braced walls. Also, in no case are guardrail systems installed with any projections into the building.

## Infeasibility

Guardrail systems are infeasible in the following situations:

1. For short-duration internal or external tasks requiring 30 minutes or less, repeatedly reinstalling a guardrail system is infeasible since it subjects employees to overexertion, and increases their exposure time to a fall hazard. Accordingly, guardrail systems are not used for short-duration tasks requiring 30 minutes or less.
2. The installation and use of a guardrail system while other workers are in close proximity impedes the ability to safely install and use the system, thereby subjecting employees and other workers to a greater hazard. Guardrail systems are only used in this situation with approval from a qualified person.

## Scaffolds

### Requirements

A scaffold is a temporary elevated working platform used to support employees and materials. Scaffolds must meet the following requirements:

1. Planking, guardrails, and toe boards may be required as part of the scaffold.
2. The poles, legs, or uprights of all scaffolds are required to be plumb, and securely and rigidly braced to prevent swaying and displacement as per OSHA Standard **29 CFR 1926.451**.
3. The ground surface should be level and stable.
4. Tubular welded frame and tube and coupler scaffolding must be secured to the building or structure at intervals not to exceed 30 feet horizontally and 26 feet vertically as per OSHA Standard **29 CFR 1926.451(c)(12), (d)(7)**.

## **Infeasibility**

Scaffolds are infeasible for the following reasons:

1. Generally, exterior scaffolds cannot be utilized on the job site because the ground, after recent backfilling, cannot always support scaffolds.
2. Scaffolds for exterior telecommunications work are generally not feasible and create a greater hazard. In most cases, the erection and dismantling of a scaffold exposes workers to a greater fall hazard than the actual exterior telecommunications work.
3. Scaffolds for interior telecommunications work are generally not feasible and create a greater hazard. Inside telecommunications work is generally performed at the same time other trades are working inside a structure. Workers working in close proximity to each other impede the ability to safely install and use scaffolds.
4. Scaffolds are not used for short-duration internal or external tasks requiring 30 minutes or less since repeatedly reinstalling scaffolds subjects employees to a greater fall hazard. Sawhorses may be used for tasks requiring more than 30 minutes to complete.

Scaffolds generally are infeasible and subject employees to a greater hazard when used to install exterior or interior telecommunications equipment and materials, and are used only when expressly authorized by a qualified person.

## **Fall Protection Systems Used at Job Site**

Employees are specially trained to install telecommunications equipment and materials and to recognize fall hazards. The nature of such work normally exposes an employee to a fall hazard for a short period of time. Any alternative fall protection method must ensure an employee is not exposed to a fall hazard for a greater period of time while installing the fall protection than the time it takes to complete the construction task.

The following topics are discussed as they relate to the alternative fall protection plan used at job sites:

- Controlled Access Zones
- Ladders
- Holes and Covers
- Wall Openings

## Controlled Access Zones

When using the alternative fall protection plan to implement alternative work practices, workers must be protected through limited access to high hazard locations. When designated fall protection systems are not feasible or create a greater hazard, the supervisor determines whether a recognized hazard exists and, if so, creates a Controlled Access Zone (CAZ) prior to using alternative work practices. A CAZ is defined as an area in which certain types of work may occur without the use of guardrail systems, personal fall arrest systems, or safety net systems. Access to the zone is restricted to authorized entrants only.

A CAZ is established by control lines, ropes, wires, signs, chains, tapes, or equivalent materials and supporting stanchions, if necessary. Employees authorized to work in the CAZ are those who have received training regarding fall protection hazards and systems. There are times when employees of other companies enter the CAZ. If an employee of another company enters the CAZ, employees should stop work to let the person proceed through the hazardous area and continue working after making sure the other company's employee is not performing work in close proximity to the direct hazard.

## Ladders

Ladders are frequently used in commercial and residential construction activities. Ladders occasionally serve as a work platform and allow access to walking and working surfaces that cannot be safely accessed from the ground. Portable ladders used for access are required to either extend three (3) feet above the upper landing surface or be secured at the top to a rigid support as per OSHA Standard **29 CFR 1926.053(b)(1)**. Ladders are used in accordance with the requirements in OSHA Standard **29 CFR 1926.1050 to 1060**.

The majority of telecommunications work performed at heights of 6 feet or more is completed with the use of a ladder. Secured ladders are moved after completing a task, relocated, and resecured prior to completing the next task. Employees are prohibited from carrying any object or load that could cause an employee to lose their balance and fall while using a ladder as per OSHA Standard **29 CFR 1926.1053(b)(22)**.

When installing telecommunications equipment or materials in attic areas, an employee may traverse the truss webs and chords or use a ladder. Traversing the truss webs and chords requires limited exposure to fall hazards during the installation of telecommunications equipment and materials. Ladders are used to install telecommunications equipment and materials in the attic area only when it is determined that ladder use is safe, appropriate, and complies with OSHA's standards.

## **Holes and Covers**

A "hole" is defined as a gap of two inches or more in a floor, roof or other walking and working surface that is six feet or more above the ground level. If workers find it necessary to cut holes, the covers of the holes should be turned and secured to indicate to subsequent workers in different trades that a hole is present.

## **Wall Openings**

A wall opening is defined as a gap of 30 inches or more in height and 18 inches or more wide in a wall or partition. Openings in residential construction consist primarily of window openings. Employees who work more than 6 feet above a lower level and the inside bottom edge of the wall opening is 39 inches above the walking and working surface should be protected from falling by a guardrail system. The guardrail system for a wall opening may consist of a midrail placed midway between the top and bottom edges of a window or door opening. The midrail materials may consist of wood, steel, tape, or other materials as long as the midrail can withstand a force of at least 150 pounds. After a window is installed, no guardrail or other type of fall protection system is required.

The guardrail system described above is not used on ground level openings. It is only used on upper level wall openings where the inside bottom edge of the wall opening is 39 inches above the walking and working surface, the outside bottom edge is 6 feet above the lower level, and the size of the opening is greater than 30 inches high and 18 inches wide.

## Installation of Telecommunications Equipment and Materials

During the installation of telecommunications equipment or materials, designated fall protection systems may be infeasible or present a greater hazard to workers. As previously described, safety nets are infeasible and can subject employees to a greater risk. Guardrails, personal fall arrest systems, and scaffolds do not provide adequate fall protection because generally there are no suitable attachment or anchorage points and they may subject employees to a greater hazard.

### External Telecommunications Work

Generally, most tasks performed on the outside of a structure at heights of 6 feet or more are of a short duration (30 minutes or less). A designated fall protection system is not required unless an anchorage point has already been installed. If an anchorage point has been installed, a personal fall arrest system should be used after a qualified person determines use of the anchorage point satisfies the standard and does not subject the employee to a greater hazard.

#### External Tasks Requiring 30 Minutes or Less

The following guidelines describe the requirements to protect workers from fall hazards who work at or above twenty-nine (29) feet and complete tasks requiring 30 minutes or less:

1. Only designated and trained workers who have completed fall protection training are allowed to work externally at heights of 29 feet or more during installation of telecommunications equipment and materials.
2. The supervisor ensures a controlled access zone is established.
3. Workers must not have any other duties to perform during the installation of telecommunications equipment and materials.
4. Workers climb onto the elevated work area or roof via a ladder or aerial device.
5. Only trained employees work on aerial lift vehicles. Employees working in aerial lift vehicles **must** use chock blocks on every job site before the lift is operated. Employees **must** secure themselves with an approved body belt with a single D-ring and lanyard of not more than six feet. Employees **must** attach the lanyard to the anchorage ring provided on the boom.

6. If designated fall protection methods are not used, the employee should perform the work from a ladder, if possible
7. Once work commences with employee(s) on the elevated work area, workers not involved in the activity should not stand or walk below or adjacent to the area where they could be struck by falling objects.
8. Workers should not remain elevated any longer than necessary to safely complete the task.
9. To minimize the time workers are exposed to a fall hazard, materials are staged to allow for the quickest installation of telecommunications equipment and materials.
10. All workers must ensure they have secure footing before they attempt to walk on the elevated surface, including cleaning shoes or boots of mud or other slip hazards.
11. When excessive wet weather (rain, snow, or sleet) is present, work on the elevated work surface is suspended unless safe footing can be assured.
12. When strong winds (above 40 MPH) are present, work on the elevated surface is suspended unless wind breakers are erected.
13. If an anchorage point has already been installed, a personal fall arrest system should be used after a qualified person determines use of the anchorage point as part of a personal fall arrest system satisfies the standard and does not subject the employee to a greater hazard.

### **External Tasks Requiring More Than 30 Minutes**

The following guidelines describe the requirements to protect workers from fall hazards who work at or above twenty-nine (29) feet and complete tasks requiring more than 30 minutes:

1. Only designated and trained workers who have completed fall protection training are allowed to work externally at heights of 29 feet or more during installation of telecommunications equipment and materials.
2. The supervisor ensures a controlled access zone is established.
3. Workers must not have any other duties to perform during the installation of telecommunications equipment and materials.

4. Aerial lift equipment, ladders, scaffolds, etc. may be used for elevated work. The worker climbs onto the elevated work surface or work area via a ladder or aerial lift.
5. Only trained employees work on aerial lift vehicles. Employee working in aerial lift vehicles **must** use chock blocks on every job site before the lift is operated. Employees **must** secure themselves with an approved body belt with a single D-ring and lanyard of not more than six feet. Employees **must** attach the lanyard to the anchorage ring provided on the boom.
6. Once work commences with employee(s) on the elevated work area, workers not involved in the activity should not stand or walk below or adjacent to the area where they could be struck by falling objects.
7. Workers should not remain elevated any longer than necessary to safely complete the task.
8. To minimize the time workers are exposed to a fall hazard, materials are staged to allow for the quickest installation of equipment or materials.
9. All workers must ensure they have secure footing before they attempt to walk on the elevated surface, including cleaning shoes or boots of mud or other slip hazards.
10. When excessive wet weather (rain, snow, or sleet) is present, work on the elevated surface is suspended unless safe footing can be assured.
11. When strong winds (above 40 MPH) are present, work on the elevated surface is suspended unless wind breakers are erected.
12. If an anchorage point has already been installed, a personal fall arrest system should be used after a qualified person determines use of the anchorage point as part of a personal fall arrest system satisfies the standard and does not subject the employee to a greater hazard.
13. If no anchorage point is installed or can be used, and the final roof coverings and materials have not been installed, slide guards may be used as an alternative measure. Slide guards extending the width of the roof may be attached to the roof if the time to install the slide guards does not exceed the time to complete the task. Slide guards must be at least 4 inches high to limit the uncontrolled slide of workers and materials. Slide guards are installed across the area where employees could be subject to falls. Slide guards should be placed as close as possible in front of the horizontal fascia line to reduce the tripping hazard of workers accessing the roof.

14. If neither personal fall arrest systems, ladders, nor slide guards can be used, a sawhorse can be used as an alternative measure. Sawhorses should be used only when the wall is less than 8 feet. Workers install the sawhorse along the wall below. The construction of 46-inch sawhorses and 2 x 10 planks often allows workers to be elevated high enough to allow for certain telecommunications work to be completed without working on the top plate.
15. A safety monitor may be used as an additional alternative measure. FairPoint Communications, Inc. designates the safety monitor. The safety monitor warns an employee when it appears the employee is unaware of a fall hazard or is acting in an unsafe manner. The safety monitor must be able to observe the employee being monitored and must be close enough to communicate orally with the employee.

## **Internal Telecommunications Work**

The primary alternative work practices used to install telecommunications equipment and materials inside structures are ladders or traversing truss webs and chords. FairPoint Communications, Inc. ensures the use of ladders complies with OSHA standards. Some of the requirements identified in the standard, and requirements of workers include:

1. Maintain ladders free from oil or grease or other slipping hazards.
2. Do not load ladders beyond their maximum intended loading limits.
3. Use non self-supporting ladders at an angle.
4. Use ladders on stable and level surfaces unless secured. Do not use ladders on slippery surfaces.
5. Do not use the top step of a stepladder as a step.
6. Face the ladder when ascending or descending a ladder.
7. Use at least one hand to grasp the ladder when going up or down the ladder.
8. The supervisor should periodically inspect ladders for visible defects.

To protect workers who are exposed to fall hazards while working on ladders, and truss webs and chords, FairPoint Communications, Inc. requires the following:

1. Only designated and trained workers who have completed fall protection training are allowed to work on ladders during installation of telecommunications equipment and materials.
2. The supervisor must ensure a controlled access zone is established.
3. Workers must not have any other duties to perform during the installation of telecommunications equipment and materials.
4. Workers may use the truss webs and chords as support while installing equipment and materials.
5. Workers may climb onto the truss webs and chords via a ladder.
6. Once work commences with an employee in the truss webs and chords, workers not involved in the activity must not stand or walk below or adjacent to the opening or in an area where they could be struck by falling objects.
7. Workers positioned in the webs and chords of trusses must work from a stable position, either by "riding the ridge," standing in a truss web or chord or other equivalent surface that provides additional stability, or by positioning themselves in previously stabilized trusses and rafters and reaching through the trusses and rafters.
8. Workers should not remain in the truss webs or chords any longer than necessary to safely complete a task.