



FALL PROTECTION AND RESCUE

Planning, Prevention, Personal Systems and Prompt Rescue

POLICY STANDARD

Pheifer Brothers generally requires fall protection at 6 feet. Protect the exposure before work begins, use the most reliable feasible system, remain continuously protected, and establish prompt rescue before personal fall-arrest systems are used.

PHEIFER BROTHERS CONSTRUCTION CO., INC.

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USE OF THIS POLICY

This policy establishes minimum company expectations and is not all-inclusive. Applicable OSHA subparts, manufacturer instructions, engineered systems, project conditions and owner requirements may require more protective or task-specific controls.

Primary Regulatory References

- 29 CFR 1926.501 - Duty to have fall protection
- 29 CFR 1926.502 - System criteria and practices
- 29 CFR 1926.503 - Training requirements
- 29 CFR 1926 Subparts L, R, X and CC
- 29 CFR 1926.701 - Concrete/reinforcing steel and 1926.106 - Work over water

Official standards: www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.501, /1926.502 and /1926.503

1. Purpose, Six-Foot Rule and Responsibilities

Purpose and Scope

This policy applies to bridge decks, piers, abutments, formwork, falsework, reinforcing steel, structural steel, scaffolds, aerial lifts, ladders, excavations, cofferdams, barges, temporary platforms, roofs, hoist areas, holes and other elevated work. It addresses employee falls, falling objects and rescue after a fall.

Company Six-Foot Rule

- Provide approved fall protection when an employee can fall 6 feet or more to a lower level, unless a more protective OSHA, project or equipment rule applies.
- Protect employees at lower heights when they could fall into dangerous equipment, impalement hazards, traffic, water or another severe hazard.
- Scaffold and steel-erection rules may have different OSHA trigger heights; Pheifer Brothers uses 6 feet as its general company minimum.
- No employee may approach an unprotected edge or begin elevated work until the selected protection and rescue arrangements are ready.

Responsibilities

- Management provides systems, training, engineering support and rescue resources.
- The qualified person designs/supervises engineered anchorages, horizontal lifelines and other systems requiring qualified-person oversight.
- The competent person identifies hazards, selects/inspects controls, authorizes use and stops unsafe work.
- Foremen incorporate fall protection and rescue into pre-task planning and maintain protected access/housekeeping.
- Employees inspect, correctly wear/connect equipment, follow the plan and report changes or defects.

STOP-WORK AUTHORITY

Any employee may stop elevated work when protection, clearance, anchorage, access, weather or rescue capability is uncertain. Work resumes only after correction and competent-person authorization.

2. Planning, Hierarchy and Walking-Working Surfaces

Site-Specific Planning

- Identify each edge, opening, elevation, access/transition point, lower-level hazard and employee exposure by work phase.
- Verify the surface has adequate strength and structural integrity before access.
- Select guardrails, covers, restraint, fall arrest, nets or positioning; identify approved anchorages and users.
- Calculate clearance/swing exposure and evaluate sharp edges, traffic, water, reinforcing steel, equipment and overhead work.
- Plan material handling so guardrails are not removed and lifelines remain unobstructed.
- Document rescue method, personnel, equipment, communication and EMS access before PFAS use.
- Review when layout, elevation, work phase, equipment, anchorage, weather or crew changes.

Fall-Protection Hierarchy

PRIORITY	CONTROL
1. Eliminate	Perform work from ground, prefabricate/assemble below, or relocate the task.
2. Passive	Use permanent/temporary guardrails, compliant covers, platforms or scaffolds.
3. Restraint	Prevent the employee from reaching the fall edge.
4. Arrest / nets	Stop a fall without contacting a lower level; provide prompt rescue.
5. Administrative	Controlled-access/monitoring methods only where specifically allowed and supported by a compliant plan.

Access and Walking Surfaces

- Maintain clear, stable, slip-resistant access; remove ice, mud, hoses, cords and loose materials.
- Guard ramps/runways/walkways at 6 feet and provide protected ladderway/landing transitions.
- Do not use unverified beams, forms, falsework or temporary members as walking surfaces.
- Coordinate changes in access with fall-protection and rescue arrangements.

PLAN BEFORE EXPOSURE

Fall protection must be installed and ready before the employee begins the work that requires it.

3. Guardrails, Covers, Openings and Falling Objects

Guardrail Systems

- Top rail: 42 inches plus or minus 3 inches; may be higher when the remaining criteria are met.
- Provide midrail/screen/intermediate protection when no wall/parapet at least 21 inches high exists.
- Top rail withstands at least 200 pounds outward/downward; midrail or equivalent withstands at least 150 pounds.
- Provide smooth surfaces without snag/projection hazards; do not use steel or plastic banding as rails.
- Flag wire-rope rails at intervals no greater than 6 feet with high-visibility material.
- Use gates/offsets at ladderways and gates/chains/removable rails at hoist openings when not actively receiving material.

Covers and Openings

- Cover or guard holes/openings before exposure; protect against stepping/tripping and falling objects.
- Covers support at least twice the maximum combined load of employees, equipment and materials that may be imposed.
- Secure covers against displacement and mark with HOLE or COVER, or use a color code that clearly identifies the hazard.
- Never remove a cover/rail until alternate protection is in place and affected employees are controlled.
- Restore protection immediately after access or material passage.

Falling-Object Protection

- Use toeboards, screens, debris nets, canopies, barricaded drop zones, tool tethering or secured materials as required.
- Keep materials far enough from edges or restrain them; control lifting/landing areas.
- Do not work below elevated operations without overhead protection or an exclusion zone.
- Wear required hard hats with chin straps buckled; head protection does not replace source controls.

DO NOT ALTER PROTECTION

Guardrails and covers are safety systems. Only authorized employees may remove or modify them, and only with alternate protection in place.

4. Personal Fall-Arrest Systems and Continuous Protection

PFAS Components and Use

- Use a full-body harness, compatible connector/lanyard or SRL, anchorage connector and approved anchorage; body belts are prohibited for fall arrest.
- Limit maximum arresting force on the employee to 1,800 pounds.
- Limit free fall to 6 feet or less unless the complete system is specifically designed/approved for greater free fall and meets all criteria.
- Rig so the employee cannot contact a lower level; account for deceleration and system limits.
- Use self-closing, self-locking compatible snaphooks/carabiners; never connect to an incompatible shape or create roll-out.
- Do not use fall-protection components to hoist tools/materials.

Harness Fit and Connection

- Select correct harness size and adjust leg, chest and shoulder straps snugly; route straps and buckles per manufacturer instructions.
- Use the designated dorsal D-ring for fall arrest unless the system instructions authorize another connection.
- Keep connectors accessible and prevent lanyards/SRLs from contacting hot work, chemicals, traffic, moving equipment or sharp edges.
- Do not knot, choke, wrap or extend lanyards unless specifically designed for that use.

Continuous Protection

- Maintain 100 percent connection whenever PFAS is required.
- Use a double-leg/Y-lanyard, horizontal/vertical lifeline, SRL, restraint or another planned method during transfers.
- Never disconnect both connectors while exposed.
- Review connection/transfer sequence before beginning; if no approved next anchorage exists, stop.

CONNECT BEFORE EXPOSURE

Do not step through a guardrail, onto a beam, outside a lift or into an exposed work area and then connect. Connection occurs first.

5. Anchorages, Clearance, Swing Falls and Leading Edges

Anchorage Requirements

- Fall-arrest anchorages are independent of platform-support/suspension systems and support at least 5,000 pounds per attached employee, or are designed as part of a complete system with a safety factor of at least two under qualified-person supervision.
- Use only identified/approved anchorages; multiple users require design for the combined load.
- Do not connect to guardrails, conduit/piping, unapproved scaffold members, rebar, form ties, light poles, equipment rails, crane hooks/rigging, ladders or unverified structural members.
- Horizontal lifelines require qualified-person design, installation and use as part of a complete system.

Fall Clearance and Swing Falls

- Use the equipment manufacturer's calculation and include lanyard/lifeline length, free fall, deceleration, harness stretch/D-ring shift, employee height, lifeline deflection and safety margin.
- Confirm clearance at the employee's actual anchorage height and work location before use.
- Position anchorage overhead when practical and keep work close to the anchorage to reduce swing.
- Do not use a 6-foot shock-absorbing lanyard or standard SRL where total required clearance is unavailable.
- Account for potential impact with girders, columns, equipment, traffic, water and edges during a swing fall.

Leading and Sharp Edges

- Use leading-edge-rated equipment when a lifeline can load over an edge; standard SRLs/lanyards may cut or fail.
- Follow required anchor height/setback, edge radius and clearance limits; use compatible edge protection where approved.
- Foot-level anchorage is allowed only when the complete system is designed/rated for it.
- Protect lifelines from abrasion, welding sparks, concrete edges and moving materials.

**VERIFY - DO NOT
GUESS**

The label '5,000 lb.' on one component does not prove the structure, connector, geometry and clearance form a safe complete system.

6. Restraint, Positioning and Safety Nets

Fall Restraint

- Adjust so the employee cannot reach the unprotected edge or opening.
- Use approved anchorage and compatible harness/connectors; inspect before use.
- Account for changing work area, line stretch and multiple access paths.
- If the arrangement could permit a fall, it must satisfy all PFAS requirements or be corrected.

Positioning-Device Systems

- Use only for permitted work on vertical surfaces such as reinforcing steel/formwork.
- Use full-body harness and rig so free fall cannot exceed 2 feet.
- Use approved anchorage and inspect before each use.
- Provide separate fall arrest when the positioning system cannot limit the fall as required.

Safety Nets

- Install as close as practicable, never more than 30 feet below; bridge fall path to the net must be unobstructed.
- Extend outward the required distance based on vertical distance and maintain clearance below.
- Drop-test after initial installation/before use, after relocation/major repair and every 6 months if left in place, unless a competent person provides the permitted certification.
- Inspect at least weekly and after events affecting integrity; remove defective parts.
- Remove tools/material from nets as soon as possible and at least before the next shift.
- Maintain drowning protection when a water hazard remains below the net.

RESTRAINT PREVENTS THE FALL

When practical, restraint is preferred because the employee cannot reach the edge and no arrest or suspension rescue is required.

7. Bridge Decks, Formwork, Rebar and Precast

Bridge Decks, Overhangs and Parapets

- Install guardrails before deck access where practicable; cover/secure openings and identify approved anchors/lifelines.
- Verify clearance below/alongside the deck considering beams, traffic, water, falsework and equipment.
- Control concrete hoses, finishing machines, rebar, materials and cords so they do not obstruct lifelines or create edge trip hazards.
- Plan guardrail removal/material landing with alternate protection and restore immediately.
- Protect people below and establish fall rescue plus water rescue when applicable.

Formwork, Falsework and Reinforcing Steel

- Protect employees on form faces/rebar 6 feet or more above lower levels with PFAS, nets or positioning systems.
- Do not climb forms, walers, braces or rebar unless planned access and protection are provided.
- Evaluate formwork leading edges during erection, modification and stripping.
- Guard protruding reinforcing steel against impalement; fall protection does not replace impalement protection.
- Verify falsework platforms, walkways and anchors are structurally suitable before use.

Precast and Girder-Related Work

- Plan erection/landing/grouting access, temporary stability, anchorage and rescue before the member is lifted.
- Maintain protection while making initial connections, releasing rigging and installing bracing.
- Do not ride loads or use rigging/crane hooks as fall-protection anchorages unless a specific applicable rule/design permits it.
- Control dropped objects and keep nonessential personnel out of the erection zone.

EDGE CONDITIONS CHANGE

Deck pours, stripping, barrier removal and material delivery can create new edges in minutes. Reassess before the work phase changes.

8. Steel Erection, Scaffolds and Ladders

Structural-Steel Erection

- Follow OSHA Subpart R and the company Steel Erection/Girder Installation Program.
- Pheifer Brothers' general standard is fall protection at 6 feet during steel erection.
- Any different procedure must be specifically permitted by Subpart R, approved by management/competent person and supported by required written planning.
- Address connectors, beam/girder walking, initial connections, temporary bracing, decking, shear connectors, controlled decking zones, anchors, access, dropped objects and rescue.
- Do not use connector/CDZ exceptions merely for convenience or lack of anchors.

Scaffolds

- Follow Subpart L and the Scaffold Program; Pheifer Brothers requires guardrails or approved protection at 6 feet, while any OSHA rule requiring protection at another height still applies.
- Do not climb cross braces, stand on rails, use boxes/ladders on platforms without specific approval or alter components.
- Do not use incomplete scaffolds unless authorized for erection/dismantling under competent-person controls.
- Observe scaffold tags/status, access and fall-protection requirements.

Ladders

- Portable ladders generally do not require PFAS when used properly, but they are not suitable for forceful, two-handed, bulky, extended-duration or overreaching work.
- Use scaffold/aerial lift when a stable platform is required.
- Do not tie PFAS to a portable ladder unless the complete system is specifically designed/approved.
- Use required ladder safety/PFAS systems on fixed ladders and follow the Ladder Safety Policy.

TASK DRIVES THE PLATFORM

Short duration does not make ladder work safe when the task requires force, both hands, heavy material or movement outside the rails.

9. Aerial Lifts, Scissor Lifts and Crane Platforms

Boom and Aerial Lifts

- Use a full-body harness connected to the manufacturer-designated anchor with the approved restraint/lanyard/SRL.
- Arrange the system to prevent ejection and minimize free fall; follow manufacturer limits.
- Do not tie to an adjacent structure, connect to ordinary guardrails, stand/climb on rails or use boxes/ladders in the platform.
- Exit an elevated platform only under a written, approved procedure with continuous protection and manufacturer allowance.
- Keep gates closed and account for catapult, crushing, traffic, overhead power and rescue hazards.

Scissor Lifts

- Maintain complete functional guardrails and remain on the platform floor inside rails.
- Do not climb/stand on rails or use ladders/boxes to gain height.
- Use harness/restraint when required by manufacturer, owner/project rule or competent-person assessment; connect only to approved anchors.
- Do not use fall arrest that creates a tip-over hazard or conflicts with manufacturer instructions.

Cranes and Personnel Platforms

- Follow Subpart CC and manufacturer rules; crane components are not anchors unless the applicable standard/manufacturer/design permits.
- Use personnel platforms only when conventional access is more hazardous or not feasible under 1926.1431.
- Complete required planning, inspections, trial lift/proof testing and personal fall protection.
- Coordinate rescue, communication, load control and exclusion zones.

USE DESIGNATED ANCHORS

A lift rail, crane hook or convenient structural member is not automatically a fall-protection anchorage.

10. Excavations, Cofferdams and Work Over Water

Excavations, Pits and Shafts

- Guard/fence/barricade excavation edges 6 feet or deeper when not readily visible due to vegetation or another visual barrier.
- Protect wells, pits, shafts and similar excavations 6 feet or deeper with guardrails, fences, barricades or covers.
- Guard walkways crossing excavations when fall exposure is 6 feet or more.
- Plan employee/equipment routes so barriers do not create a new traffic or access hazard.

Cofferdams

- Provide guardrailed walkways, bridges or ramps with at least two rapid exits.
- Maintain protection during dewatering, bracing changes and controlled flooding arrangements.
- Keep exits/guardrails clear and inspect after water rise, pump issues, movement or weather.
- Coordinate fall rescue with evacuation and flooding response.

Working Over or Near Water

- Provide required fall protection at 6 feet or more above water.
- When drowning danger remains, also wear a properly fitted Coast Guard-approved PFD and provide required lifesaving equipment.
- A PFD does not replace fall protection.
- Plan both suspended-worker rescue and person-in-water recovery; ensure harness/PFD compatibility.
- Consider swing falls into piers, barges, steel, current or traffic below.

Dangerous Equipment and Impalement

- Protect employees even below 6 feet when a fall could enter/strike dangerous equipment.
- Guard rebar, form stakes, sheet piling, equipment and other impalement/struck hazards below elevated work.
- Do not rely on fall clearance that stops the employee after contact with a severe lower-level hazard.

TWO RESCUE SYSTEMS MAY APPLY

Over-water PFAS work may require both suspended-worker rescue and water recovery. Plan and equip for both before exposure.

11. Inspection, Rescue and Suspension Trauma

Equipment Inspection and Care

- User inspects before each use: webbing/cable/rope, stitching, D-rings, hooks/carabiners, absorbers, SRL operation, labels, corrosion, burns, chemicals, cuts, abrasion, deformation and impact indicators.
- Verify component compatibility, service dates and manufacturer-required formal inspections.
- Tag/remove questionable equipment; do not field repair unless authorized by manufacturer.
- Store clean/dry away from sunlight, chemicals, welding, sharp edges and damaging temperatures.
- After a fall, immediately remove/tag every loaded component and return only when manufacturer instructions and a competent/qualified evaluation permit.

Prompt Rescue Plan

- Identify self/assisted rescue method, trained personnel, equipment, anchors/access, communication, site location, EMS contacts and casualty lowering/retrieval.
- Calling 911 alone is not adequate when responders cannot provide prompt suspended-worker rescue.
- Use planned methods such as self-rescue, aerial lift, assisted ladder, pre-rigged lowering or qualified technical rescue.
- Do not improvise a rescue that exposes another employee to an uncontrolled fall.
- Conduct drills appropriate to the system and conditions; keep rescue equipment accessible.

Suspension Trauma and Post-Fall Care

- Rescue a suspended employee as quickly as possible.
- If able, the employee remains calm, moves legs, uses relief straps and follows instructions without unsafe self-rescue.
- After recovery provide first aid, call/coordinate EMS and arrange medical evaluation as appropriate.
- Do not assume the employee is uninjured because the fall was arrested.
- Preserve equipment/scene and follow incident reporting requirements.

RESCUE IS PART OF THE SYSTEM

A harness that arrests the fall but leaves the employee suspended without prompt recovery is not a complete protection plan.

12. Training, Alternative Plans, Weather and Stop Work

Training and Retraining

- A competent person trains exposed employees in hazard recognition, systems, equipment use, anchors, connections, clearance, swing/leading edges, rescue and falling objects.
- Employees demonstrate harness fit, inspection, connection and transfer procedures before exposure.
- Retrain after changes, incident/near miss, improper use or evidence of inadequate understanding.
- Document employee name, training date and trainer/qualified person as required.
- Toolbox talks reinforce but do not replace required competent-person fall-protection training.

Alternative Fall-Protection Plans

- Use only for activities where OSHA specifically permits one and conventional systems are demonstrated infeasible or a greater hazard.
- A qualified person develops a written, site-specific plan identifying authorized employees and controlled areas; management approves before work.
- Cost, schedule, inconvenience or lack of planning do not establish infeasibility.
- A warning line or monitor may not substitute for protection unless the applicable OSHA provision expressly permits it.

Weather and Environmental Conditions

- Stop when wind affects balance/system stability, lightning creates risk, or ice/snow/rain/mud makes surfaces unsafe.
- Stop for inadequate visibility, affected anchors/lifelines, flooding/water change or unavailable rescue.
- Remove snow/ice and reinspect affected systems/surfaces before restart.

Stop-Work Conditions

- Protection/approved anchorage is missing; clearance is insufficient; equipment is damaged/incompatible.
- Edge/opening is unprotected; continuous connection cannot be maintained; rail/cover removed without alternate protection.
- Weather/surface is unsafe; rescue is unavailable; conditions differ from the plan; employee is uncertain the system will work.

COMPETENT-PER SON RESTART

Only the competent person, with qualified-person assistance when required, may authorize restart after the condition is corrected.

13. Test Your Knowledge

Circle the best answer. Review missed questions with your foreman before beginning elevated work.

1. What is Pheifer Brothers' general fall-protection trigger? A. 10 feet B. 6 feet C. 15 feet	2. May a standard guardrail serve as a PFAS anchorage? A. Yes B. Only at night C. No, unless specifically designed/approved as an anchorage
3. What is the preferred control when practical? A. Eliminate the exposure or use passive protection B. Warning only C. Work faster	4. What is required during PFAS transfers? A. Both hooks disconnected B. Continuous/100 percent protection C. A spotter only
5. What must happen to equipment loaded in a fall? A. Reuse after wiping it B. Store in the truck C. Remove/tag it from service immediately	6. Does a PFD replace fall protection over water? A. No B. Yes C. Only above a barge
7. Who supervises horizontal-lifeline design and use? A. Any employee B. A qualified person C. The delivery driver	8. What must be verified before choosing a lanyard/SRL? A. Color B. Brand popularity C. Clearance, swing and edge compatibility
9. Is calling 911 alone always an adequate rescue plan? A. Yes B. No C. Only for bridge work	10. When may an alternative fall plan be used? A. Whenever convenient B. When equipment is expensive C. Only where OSHA permits and qualified written findings support it

EMPLOYEE: _____

DATE: _____

ANSWER KEY: 1-B | 2-C | 3-A | 4-B | 5-C | 6-A | 7-B | 8-C | 9-B | 10-C