FALL PROTECTION PROGRAM

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Contents

OBJECTIVE

Each year, the Bureau of Labor Statistics (BLS) reports that far too many workers die on the job, with many of those fatalities resulting from falls. Events surrounding these types of accidents often involve a number of factors, including unstable working surfaces, misuse of fall protection equipment, and human error. Studies have shown that the use of guardrails, fall arrest systems, covers, and proper training can prevent many deaths and injuries from falls.

Whenever performance of any task would allow a worker to fall a distance of six (6) feet or more to a lower level, the project requires pre-planning to ensure that fall hazards are identified, evaluated, and controlled. The worker must receive adequate training and be protected from falling.

In order to comply with Occupational Safety and Health Administration Standards (OSHA) and other state OSHA programs, this written program has been established for RockForce(hereafter referred to as “the Company”). All Company projects and facilities are included and will comply with this program. Copies of this written program, including a copy of the proper OSHA Standards, are available for review by any worker.

Employees whose job descriptions involve exposure to fall hazards will engage their duties pursuant to OSHA Construction Industry trigger heights and requirements. The RockForce Fall Protection Plan was prepared using guidelines provided in 29 CFR 1910, Subpart D of the General Industry Standards (Walking Working Surfaces) and 29 CFR 1926, Subpart M and Subpart X, Fall Protection, Appendix E. This fall protection plan is provided as a resource and not designed to address all work site scenarios and fall hazards. It is a set of policies and procedures designed to help identify and reduce fall hazards. The general approach is centered on a five (5) tiered hierarchy of fall protection controls, as outlined below.

Hierarchy of Controls

1. The top priority is to eliminate the fall hazard, whenever feasible.
2. The second priority is to install and use passive fall restraints (e.g., guardrails and barriers) to prevent falls.
3. The third priority is to use active fall restraints to prevent falls.
4. The fourth priority is to use fall arrest systems to prevent severe injuries in the event of fall.

5. The last resort is to establish a controlled access zone to notify and warn workers of fall hazards.

Occupational Safety and Health Administration (OSHA) regulations require the use of fall protection when workers are working at heights of 4-6 feet or greater above a lower level. It is recommended that heights or exposed edges be controlled when working near dangerous equipment, for example, working over machinery with open drive belts, pulleys or gears. For workers on Scaffolds, heights of more than 10 feet from a lower level must be protected.

If adequate fall protection cannot be provided, then the work cannot be performed.

The program is reviewed at least annually to ensure both the safety of workers and compliance with the OSHA Fall Protection standards, as well as any state and local requirements.

ASSIGNMENT OF RESPONSIBILITY

The Fall Protection Program Manager is responsible for:

1. Providing oversight and technical support;
2. Designing and implementing training and education programs;
3. Securing the resources necessary to implement this program;
4. Ensuring that routine safety checks of work operations are performed;
5. Conducting an annual review of this program, including an inspection of systems;
6. Updates (as needed) to ensure the effectiveness of the program;
7. Seeking additional expertise when needed;
8. Including all levels of crew and management in plan development to ensure compliance and feasibility;
9. Ensuring that proper reporting and record keeping is executed, and;
10. Investigating all falls and “near miss” falls for corrective action.

Supervisor / Foremen / Lead Riggers are responsible for:

1. Compliance with this program at project sites under their supervision;
2. Performing routine safety checks of work operations;
3. Correcting any unsafe practices or conditions immediately;
4. Ensuring workers have the proper tools and personal protective equipment for working on elevated work surfaces;
5. Confirming provided anchorage is compatible with connectors;

6. Performing Competent Level inspections of PFAS at least once annually, twice in California;
7. Coordinating workers' schedules for training, and;
8. Notifying their division office of potential hazards requiring assessments, or improvements to the program.

Workers are responsible for:

1. Complying with all aspects of this program;
2. Cooperating in all safety and health matters;
3. Reporting incidents related to fall protection to your supervisor/foreman/lead rigger immediately;
4. Wearing all required personal protective equipment – there are no exceptions;
5. Inspecting the equipment in accordance with manufacturer's guidelines and instructions;
6. Ensuring they are authorized to use provided anchorage;
7. Reporting hazardous or uncertain conditions or other health and safety concerns immediately to your supervisor/foreman/project manager, and;
8. Adhering to the 100% Clip In policy.

SCOPE

The following Fall Protection Plan is prepared for the prevention of injuries associated with falls from heights greater than 6 feet above a lower level or leading edges adjacent to or above a hazard. Site specific Fall Protection Plans must be developed and evaluated on a site-by-site basis. It is recommended that builders discuss the written Fall Protection Plan with their OSHA Area Office prior to going on a jobsite.

Typical RockForce workers exposed to fall hazards are known as "riggers". These workers are trained to use PFAS systems involving anchorage at or above their dorsal D-rings. RockForce employees are not authorized to use anchorage that is or appears to be below dorsal D-ring height without additional training and permissions.

RockForce is not a contractor or installer. If permanent anchorages need to be installed on a jobsite, RockForce will involve professional fall protection installation companies for that purpose.

RockForce maintains that up (high) riggers must climb and work in pairs, supported by a ground rigger (spotter) when conditions require it. Each call

must have an experienced lead rigger assigned. This lead should be capable of performing a job hazard assessment and identifying potential hazards beyond normal rigging risks.

DEFINITIONS

Anchorage - a secure point of attachment for lifelines, lanyards, or deceleration devices.

Authorized Person - A person designated by the Company, who can work safely at heights by reason of training or experience in the proper selection and use of fall protection equipment.

Body belt (safety belt) - a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device. Note: Since January 1, 1998, OSHA has prohibited the use of a body belt as part of a personal fall arrest system.

- *Exception: When used correctly, body belts are recognized by OSHA as an acceptable fall protection component when used as a part of 1) a restraining device that prevents a fall or 2) a positioning device that limits a free fall to 2 feet.*

Body harness - straps that may be secured about the worker in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders, with means for attaching it to other components of a personal fall arrest system.

Buckle - any device for holding the body belt or body harness closed around the worker’s body.

Class 1 SRL - a Self-Retracting Lifeline compliant with the ANSI Z359.14-2021 standard, designed for overhead anchor points at or above the user's dorsal D-ring.

Class 2 SRL - an ANSI Class 2 Self-Retracting Lifeline is a fall protection device for situations where the anchor point might be above, at, or even below the user's dorsal D-ring, and specifically designed for leading-edge applications.

Competent person - one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to workers, and who has authorization to take prompt corrective measures to eliminate them.

Connector - a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap hook spliced or sewn to a lanyard or self-retracting lanyard). All fall arrest connectors must be dual-action and self-locking.

Controlled access zone (CAZ) - an area in which certain work (for example, overhand bricklaying) may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems; and where access to the zone is controlled.

Deceleration device - any mechanism (such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc.) which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on a worker during fall arrest.

Deceleration distance - the additional vertical distance a falling worker travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of a worker's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the worker comes to a full stop.

Equivalent - alternative designs, materials, or methods to protect against a hazard, which the employer can demonstrate will provide an equal or greater degree of safety for workers than the methods, materials, or designs specified in the standard.

Failure - load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

Fall rescue - The need to retrieve a worker who has fallen from an elevated work area / platform and is suspended in a full body harness.

Self rescue - a procedure whereby a fallen worker has the capability to get back to the point of the fall or other safe location on their own.

Mechanically assisted rescue - A procedure for the retrieval of a fallen person using a mechanical device. This type of rescue is needed when self-rescue is not an option (location, equipment failure, injury, etc.

Free fall - the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

Free fall distance - the vertical displacement of the fall arrest attachment points on the worker's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance and lifeline/lanyard elongation but includes any deceleration device slide distance or self- retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

Guardrail system - a barrier erected to prevent workers from falling to lower levels.

Hole - a gap or void 2 inches or more in its least dimension, in a floor, roof, or other walking or working surface.

Infeasible - impossible to perform the construction work using a conventional fall protection system (that is, guardrail system, safety net system, or personal fall arrest system); or technologically impossible to use any one of these systems to provide fall protection.

Lanyard - a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

Leading edge - the edge of a floor, roof, or formwork for a floor or other walking or working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

Lifeline - a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

Lower levels - those areas or surfaces to which a worker can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

Opening - a gap or void 30 inches or higher and 18 inches or wider, in a wall or partition, through which workers can fall to a lower level.

A personal fall arrest system (PFAS) - a system used to arrest a worker in a fall from a working level. It consists of an anchorage, connectors, body harness and rescue plan. It may include a lanyard, deceleration device, lifeline, or suitable combinations of these. Note - Since January 1, 1998, the use of a body belt for fall arrest has been prohibited.

Positioning device system - a body belt or body harness system rigged to allow a worker to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

Qualified - one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

Rope grab - a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of a worker. A rope grab usually employs the principles of inertial locking, cam/level locking, or both.

Safety-monitoring system - a safety system in which a competent person is responsible for recognizing and warning workers of fall hazards.

Self-retracting lifeline/lanyard - a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal worker movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

Snap hook - a connector composed of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snap hooks are generally one of two types:(1) The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or (2) The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snap hook as part of personal fall arrest systems and positioning device systems is prohibited.

Toe board - a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide workers with protection from falls.

Type 1 Lanyard - ANSI Type 1 lanyards are suitable for situations where anchorage is at or above the dorsal D-ring.

Type 2 Lanyard - ANSI Type 2 lanyards may be used when the anchor point is below the dorsal D-ring.

Unprotected sides and edges - any side or edge (except at entrances to points of access) of a walking or working surface (for example, floor, roof, ramp, or runway) where there is no wall or guardrail system at least 39 inches high.

Walking or working surface - any surface (whether horizontal or vertical) on which a worker walks or works, including but not limited to floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel; but not including ladders, vehicles, or trailers, on which workers must be located in order to perform their job duties.

Warning line system - a barrier erected on a roof to warn workers that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body harness, or safety net systems to protect workers in the area.

FALL PROTECTION SYSTEMS TO BE USED ON THE JOB

Eliminating Fall Hazards – Priority One

The top priority of the fall protection plan is to eliminate fall hazards whenever feasible. This includes moving tasks to ground level, as well as changing the workflow and job design to allow work to be performed at ground level.

Passive Fall Restraints – Guardrail Systems

When it is not feasible to eliminate a fall hazard, then physical barriers, such as guardrail systems, should be installed to prevent falls. A guardrail system must be durably constructed and meet OSHA design specifications.

Guardrail systems are barriers erected to prevent workers from falling to lower levels. If the employer chooses to use guardrail systems to protect workers from falls, the following provisions apply:

1. Top rails, or equivalent guardrail system members, must be 42 inches plus or minus 3 inches above the walking or working level. When workers are using stilts, the top edge of the top rail, or equivalent member, must be increased an amount equal to the height of the stilts. 29 CFR 1926.502(b)(1).

2. Screens, midrails, mesh, intermediate vertical members, or equivalent intermediate structural members must be installed between the top edge of the guardrail system and the walking or working surface when there are no walls or parapet walls at least 21 inches high. 29 CFR 1926.502(b)(2).
    a. When midrails are used, they must be installed at a height midway between the top edge of the guardrail system and the walking or working level.
    b. When screens and mesh are used, they must extend from the top rail to the walking or working level and along with the entire opening between top rail supports.
    c. When necessary, screens and/or mesh must be installed in a manner to prevent workers from falling underneath.
    d. When intermediate members (such as balusters) are used between posts, they must not be more than 19 inches apart.
    e. Other structural members (such as additional midrails and architectural panels) must be installed so that there are no openings in the guardrail system more than 19 inches wide.
3. Guardrail systems must be capable of withstanding a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge. 29 CFR 1926.502(b)(3).
4. Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members must be capable of withstanding a force of at least 150 pounds applied in any downward or outward direction at any point along the midrail or other member. 29 CFR 1926.502(b)(5).
5. Guardrail systems must have a surface to protect workers from punctures or lacerations and to prevent clothing from snagging. 29 CFR 1926.502(b)(6).
6. The ends of top rails and midrails must not overhang terminal posts, except where an overhang poses no projection hazard. 29 CFR 1926.502(b)(7).
7. Steel and plastic banding cannot be used as top rails or midrails. 29 CFR 1926.502(b)(8).
8. Top rails and midrails of guardrail systems must have a nominal diameter or thickness of at least 1/4 inch to prevent cuts and lacerations. 29 CFR 1926.502(b)(9).
9. If wire rope is used for top rails, it must be flagged at not more than 6-foot intervals with high-visibility material. 29 CFR 1926.502(b)(9).

10. When guardrail systems are used at hoisting areas, a chain, gate, or removable guardrail section must be placed across the access opening between guardrail sections during those times when hoisting operations are not taking place. 29 CFR 1926.502(b)(10).
11. When guardrail systems are used at holes, they must be set up on all unprotected sides or edges. When a hole is used for the passage of materials, it must not have more than two sides with removable guardrail sections. When the hole is not in use,
12. It must be covered or provided with a guardrail system along all unprotected sides or edges. 29 CFR 1926.502(b)(11) & (12).
13. If guardrail systems are used around holes being used as access points (such as ladderways), gates must be used. Alternatively, the point of access must be offset to prevent workers from accidentally walking straight into the hole. 29 CFR 1926.502(b)(13).
14. If guardrails are used on ramps and runways, they must be erected on each unprotected side or edge. 29 CFR 1926.502(b)(14).
15. Manila, plastic, or synthetic rope used for top rails or midrails must be inspected as frequently as necessary to ensure its strength and stability. 29 CFR 1926.502(b)(15).

Active Fall Restraints

While fall restraint systems are not mentioned in Subpart M, OSHA recognizes a fall restraint system as a means of prevention. The system, if properly used, tethers a worker in a manner that will not allow a fall of any distance. This system consists of a body harness, an anchorage, connectors, and other necessary equipment. Other components typically include a lanyard, a lifeline, and other devices. For a restraint system to work, the anchorage must be strong enough to prevent the worker from moving past the point where the system is fully extended, including an appropriate safety factor.

OSHA suggested that, at a minimum, a fall restraint system must have the capacity to withstand at least 3,000 pounds or twice the maximum expected force that is needed to restrain the person from exposure to the fall hazard.

Fall Arrest Systems

A personal fall arrest system is a system used to safely stop (arrest) a worker who is falling from a working level. It consists of an anchorage, connectors, body harness and rescue plan. It also may include a lanyard, deceleration device, lifeline, or suitable combinations of these. Body belts (safety belts) are prohibited for use as part of a personal fall arrest system.

When employers choose to use a personal fall arrest system as a means of worker fall protection they must:

1. Limit the maximum arresting force on a worker to 1,800 pounds when used with a body harness. 29 CFR 1926.502(d)(16)(ii).
2. Be rigged so that a worker can neither free fall more than 6 feet nor contact any lower level. 29 CFR 926.502(d)(16)(iii).
3. Bring a worker to a complete stop and limit the maximum deceleration distance a worker travels to 3.5 feet. 29 CFR 1926.502(d)(16)(iv).
4. Have sufficient strength to withstand twice the potential impact energy of a worker free falling a distance of 6 feet or the free fall distance permitted by the system, whichever is less. 29 CFR 1926.502(d)(16)(v).
5. Be inspected prior to each use for wear, damage, and other deterioration. Defective components must be removed from service. 29 CFR 1926.502(d)(21).

Controlled Access Zones

When using the Plan to implement the fall protection options available, workers must be protected through limited access to high hazard locations. Before any non-conventional fall protection systems are used as part of the work plan, a controlled access zone (CAZ) shall be clearly defined by the competent person as an area where a recognized hazard exists. The competent person shall communicate the demarcation of the CAZ in a recognized manner, through either signs, wires, tapes, ropes or chains.

RockForce shall take the following steps to ensure that the CAZ is clearly marked or controlled by the competent person:

1. All access to the CAZ must be restricted to authorized entrants.
2. All workers who are permitted in the CAZ shall be listed in the appropriate sections of the Plan (or be visibly identifiable by the competent person) prior to implementation.
3. The competent person shall ensure that all protective elements of the CAZ be implemented prior to the beginning of work.

Personal Fall Arrest System Components

Snap Hooks

Snap hooks must be the locking type and designed and used to prevent disengagement from any component part of the personal fall arrest system. 29 CFR 1926.502(d)(5) / 1910.140(c)(9)

Unless the snap hook is a locking type and designed for the following connections, snap hooks shall not be engaged:

1. Directly to webbing, rope, or wire rope;
2. To each other;
3. To a D-ring to which another snap hook or other connector is attached, or;
4. To any object which is incompatibly shaped or dimensioned in relation to the snap hook, such that unintentional disengagement could occur by the connected object being able to depress the snap hook keeper and release itself. 29 CFR 1926.502(d)(6).

Horizontal Lifelines

On suspended scaffolds or similar work platforms with horizontal lifelines that may become vertical lifelines, the devices used to connect to a horizontal lifeline must be capable of locking in both directions on the lifeline. 29 CFR 1926.502(d)(7).

Horizontal lifelines must be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of at least two. 29 CFR 1926.502(d)(8).

Commercially available temporary horizontal lifeline systems meeting current OSHA standards may be installed by a Competent Person.

Vertical Lifelines and Lanyards

Vertical lifelines and lanyards must have a minimum breaking strength of 5,000 pounds. 29 CFR 1926.502(d)(9). Lifelines must be protected against being cut or abraded. 29 CFR 1926.502(d)(11).

Self-retracting Lifelines and Lanyards

Self-retracting lifelines and lanyards that automatically limit free fall distance to 2 feet or less must be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position. 29 CFR 1926.502(d)(12).

Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, rip stitch lanyards, and tearing and deforming lanyards must be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position. 29 CFR 1926.502(d)(13).

ANSI Class 1 and Type 1 SRDs and lanyards will be used for anchorages at or above the dorsal D-ring. ANSI Class 2 and Type 2 SRDs and lanyard will be used for anchorages below the dorsal D-ring.

Ropes and Straps

Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses must be made of synthetic fibers. 29 CFR 1926.502(d)(14).

Anchorages

Anchorages used to attach personal fall arrest systems must be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system which maintains a safety factor of at least two. Alternatively, the anchorages must be independent of any anchorage being used to support or suspend platforms and must be capable of supporting at least 5,000 pounds per worker attached or be capable of supporting at least twice the expected impact load. 29 CFR 1926.502(d)(15).

RockForce employees are not authorized to use anchorages that are or appear to be below dorsal D-ring height.

Rescue Plans and Equipment

Workers can have the onset of orthostatic intolerance in as little as 10 minutes. All workers using fall arrest systems must be monitored and promptly rescued in the event of a fall. Rescue shall commence within 6 minutes of the fall event, in addition to rescue equipment available onsite, use of self-rescue devices is recommended.

A separate rescue plan may include equipment available onsite such as MEWP's, ladders, scaffolding, rescue systems such as the Petzl Jag System, DBI-SALA Rollgliss R550 or other systems.

Additional information regarding training and practice may be found in the RockForce Rescue Plan document.

FALL PROTECTION PROCEDURES

Basic Fall Protection

The floor of every workroom shall be maintained in a clean and, so far as possible, in a dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places should be provided where practicable.

1. Where mechanical handling equipment is used, sufficient safe clearances shall be allowed for aisles, at loading docks, through doorways and wherever turns or passages must be made.
2. Aisles and passageways shall be kept clear and in good repairs, with no obstruction across or in aisles that could create a hazard.
3. Every stairway floor opening shall be guarded by a standard railing constructed in accordance with applicable OSHA requirements. The railing shall be provided on all exposed sides (except at entrance to stairway).
4. Every ladderway floor opening or platform shall be guarded by a standard railing with standard toe board on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.

Fall rescue procedures will be evaluated prior to each project and a fall rescue plan prepared as needed.

Fall Protection Systems

Only the Safety Officers or Competent Persons and the immediate supervisor can make decisions on the proper fall protection system to be used for any specific application. Fall protection systems will only be utilized after careful consideration.

TASKS AND WORK AREAS REQUIRING FALL PROTECTION

Hoist Areas

Guardrail systems or personal fall arrest systems will be used in hoist areas when a worker may fall four (4) feet or more. If guardrail systems must be removed for hoisting, workers are required to use personal fall arrest systems.

Ladders

Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.

1. Ladders shall be inspected frequently and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use."
2. Rungs should be kept free of grease and oil.

3. Portable ladders shall be so placed that the side rails have a secure footing.
4. Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked upon, locked, or guarded.
5. Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.
6. Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment shall not be used; improvised repairs shall not be made.
7. Tops of the ordinary types of stepladders shall not be used as steps.
8. No ladder should be used to gain access to a roof unless the top of the ladder shall extend at least 3 feet above the point of support, at eave, gutter, or roofline.
9. A simple rule for setting up a ladder at the proper angle is to place the base a distance from the vertical wall equal to one-fourth the working length of the ladder.
10. Portable ladders are designed as a one-man working ladder based on a 200-pound load.
11. The ladder base section must be placed with a secure footing.
12. When ascending or descending, the climber must face the ladder.
13. Workers should not lean too far over the side rails of a ladder such that it causes a fall hazard. A good “rule of thumb” is that workers keep their belt buckle within the side rails at all times.

Scaffolds

The following are basic procedures that apply to scaffolds. There are many different types of scaffolds (see list below), and each type may have specific requirements. Only trained personnel under the supervision of a Competent Scaffold Supervisor will be permitted to assemble, disassemble, and work from any scaffold more than 10’ from a lower level.

- RockForce does not provide Competent Scaffold Supervisors.

1. The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.
2. Scaffolds and their components shall be capable of supporting without failure at least four times the maximum intended load.

3. Scaffolds and other devices mentioned or described in this section shall be maintained in safe condition. Scaffolds shall not be altered or moved horizontally while they are in use or occupied.
4. Any scaffold damaged or weakened from any cause shall be immediately repaired and shall not be used until repairs have been completed.
5. Scaffolds shall not be loaded in excess of the working load for which they are intended.
6. All planking or platforms shall be overlapped (minimum 12 inches) or secured from movement.
7. An access ladder or equivalent safe access shall be provided.
8. Scaffold planks shall extend over their end supports not less than 6 inches nor more than 18 inches.
9. The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement.
10. Materials being hoisted onto a scaffold shall have a tag line.
11. Overhead protection shall be provided for workers on a scaffold exposed to overhead hazards.
12. Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge U.S. Standard Wire one-half-inch mesh or the equivalent, where persons are required to work or pass under the scaffolds. Tools, materials, and debris shall not be allowed to accumulate in quantities to cause a hazard.
13. Scaffolds shall be secured to permanent structures, through use of anchor bolts, reveal bolts, or other equivalent means.
14. Specific training and procedures will be followed for the various types of scaffolding required for the project including, but not limited to, the following types of scaffolds:
    a. Tube and coupler scaffolds;
    b. Tubular welded frame scaffolds;
    c. Outrigger scaffolds;
    d. Boatswain's chairs;
    e. Bricklayers' Square Scaffolds;
    f. Crawling board or chicken ladders;
    g. Float or ship scaffolds;
    h. Manually propelled mobile ladder stands and scaffolds (towers);
    i. Protection from falling objects, and;
    j. System Scaffolding.

15. The fall protection regulation is not only designed to protect workers from falls, but also to protect workers from having objects fall on them. The use of toe boards is one method of complying with the requirements for overhead protection. The toe board should be used as an element of the guardrail system. It is a rail placed at the walking/working surface level.
16. Toe boards are required to withstand a force of 50 pounds and are generally made of 2x4s. In areas where material is to be stored and the stack is higher than the toe board, a screen or panel should be placed from the toe board to either the midrail or top rail, whichever is higher than the stored material, to prevent materials from slipping through.
17. It is wise to store materials away from the edges of floors or roofs and away from any holes. Even small holes, such as those for heating or cooling ducts, should have covers placed on them and secured to prevent materials or tools from falling through and injuring someone on a lower level.
18. A tool and equipment tie-off (tethering) program will be implemented at each location where work from heights is conducted. All tools and equipment should be evaluated for appropriate tethering / drop protection pursuant to ANSI 121.
19. The key to providing a safer workplace for workers is ensuring that there is a good housekeeping program. If materials and debris are properly cleaned up and tools are put in proper storage areas and tethered when used, the hazard of falling objects can be greatly reduced.

Covers

All holes and wall covers shall be designed to support twice the anticipated loads and shall be secured to prevent accidental displacement.

1. Covers are color-coded or bear the markings “HOLE” or “COVER”.
2. Covers are able to support twice the weight of workers, equipment, and materials that might cross them.
3. *Covers located in roadways are able to support twice the axle load of the largest vehicle that might cross them.

Guardrail Systems

Guardrail systems are erected at unprotected edges, ramps, runways, or holes where it is determined by the supervisor\foremen that erecting such systems will not cause an increased hazard to workers. The following specifications are followed in the erection of guardrail systems.

The top rails are:

1. At least ¼ inch in diameter (steel or plastic banding is unacceptable).
2. Flagged every six (6) feet or less with a high visibility material if wire rope is used.
3. Inspected by supervisor\foreman as frequently as necessary to ensure strength and stability.
4. Forty-two (42) inches (plus or minus three (3) inches) above the walking/working level; and
5. Adjusted to accommodate the height of stilts if they are in use.

Midrails, screens, mesh, intermediate vertical members, and solid panels are erected in accordance with the OSHA Fall Protection Standard. Gates or removable guardrail sections are placed across openings of hoisting areas or holes when they are not in use to prevent access.

A standard railing shall consist of top rail, intermediate rail, and posts, and shall have a vertical height of 42 inches nominal from upper surface of top rail to floor, platform, runway, or ramp level. The top rail shall be smooth surfaced throughout the length of the railing.

The intermediate rail shall be approximately halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts except where such overhang does not constitute a projection hazard.

A standard toe board shall be 4 inches nominal in vertical height from its top edge to the level of the floor, platform, runway, or ramp. It shall be securely fastened in place and with no more than 1/4-inch clearance above floor level. It may be made of any substantial material either solid or with openings not over 1 inch in greatest dimension.

Full Body Harness

Equipment designed specifically to spread the impact forces of a fall across the wearer's body to minimize harm.

Workers must wear a full body harness that is the correct size for their physique, ensure all connectors are securely fastened, and it is adjusted to fit them snuggly. Body belts are not acceptable for any use at any time.

Connecting devices must only be attached to the back D-ring on the full body harness. Side D-rings (on select harnesses) are to be used for work positioning only.

The harness back D-ring should be located toward the wearer's upper back, approximately between his/her shoulder blades.

Personal Fall Arrest Systems

All components of a fall arrest system meet the specifications of the OSHA Fall Protection Standards and are used in accordance with the manufacturer's instructions.

Personal fall arrest systems are issued to and used by workers as determined by the Safety Manager and may consist of anchorage, connectors, body harness, deceleration device, lifeline, or suitable combinations.

Personal fall arrest systems:

1. Limit the maximum arresting force to 1800 pounds;
2. Are rigged so a worker cannot free fall more than six (6) feet or contact any lower level;
3. Bring a worker to a complete stop and limit the maximum deceleration distance traveled to three and a half (3 ½) feet;
4. Are they strong enough to withstand twice the potential energy impact of a worker free falling six (6) feet (or the free fall distance permitted by the system, whichever is less);
5. Are inspected prior to each use for damage and deterioration;
6. Are removed from service if any damaged components are detected, and;
7. The use of non-locking single-action snap hooks is prohibited.

D-rings and locking snap hooks:

1. Have a minimum tensile strength of 5000 pound, and;
2. Are proof tested to a minimum tensile load of 3600 pounds without cracking, breaking, or suffering permanent deformation.

Lifelines are:

1. Designed, installed, and used under the supervision of a qualified person – one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project;
2. Protected against cuts and abrasions;
3. Equipped with horizontal lifeline connection devices capable of locking in both directions on the lifeline when used on suspended scaffolds or

similar work platforms that have horizontal lifelines that may become vertical lifelines;
4. Capable of sustaining a minimum tensile load of 3600 pounds if they automatically limit free fall distance to two (2) feet;
5. Sustain a minimum tensile load of 5000 pounds (includes rip stitch, tearing, and deforming lanyards);
6. Anchorages support at least 5000 pounds per person attached;
7. Anchorages are designed, installed, and used under the supervision of a qualified person;
8. Temporary Horizontal Lifelines that meet these criteria may be installed by a Competent Person;
9. Capable of supporting twice the weight expected to be imposed on it; and;
10. Independent of any anchorage used to support or suspend platforms, unless allowed by the manufacturer of a temporary HLL system, and approved by a Competent Person.

Positioning Device Restraint Systems

Body harness systems are set up so that a worker can free fall no farther than two (2) feet and are secured to an anchorage capable of supporting twice the potential impact load or 3000 pounds, whichever is greater. Requirements for snap hooks, dee-rings, and other connectors are the same as detailed in this Program under Personal Fall Arrest Systems.

Safety Monitoring Systems

In situations when no other fall protection has been implemented, supervisor/foremen/lead riggers monitor the safety of workers in these work areas.

The supervisor / foreman / lead rigger is:

1. Competent in the recognition of fall hazards;
2. Capable of warning workers of fall hazard dangers;
3. Operating on the same walking/working surfaces as the workers and able to see them;
4. Close enough to work operations to communicate orally with workers, and;
5. Free of other job duties that might distract them from the monitoring function.

No workers other than those engaged in the work being performed under the Safety Monitoring System are allowed in the area. All workers under a

Safety Monitoring System are required to promptly comply with the fall hazard warnings of the supervisor/foreman/lead rigger.

Warning Line Systems

Warning line systems consisting of supporting stanchions and ropes, wires, or chains are erected around all sides of open edged work areas.

1. Lines are flagged at no more than six (6) foot intervals with high-visibility materials.
2. The lowest point of the line (including sag) is between 34 and 39 inches from the walking/working surface.
3. Stanchions of warning line systems are capable of resisting at least 16 pounds of force.
4. Ropes, wires, or chains have a minimum tensile strength of 500 pounds.
5. Warning line systems are erected at least six (6) feet from the edge, except in areas where mechanical equipment is in use. When mechanical equipment is in use, warning line systems are erected at least six (6) feet from the parallel edge, and at least ten (10) feet from the perpendicular edge.

Fall Rescue

1. The potential for fall rescue will be evaluated prior to each project and a written fall rescue plan shall be in place prior to project start up. It is preferable that this be done in conjunction with applicable project pre-planning procedures.
2. All workers will be trained in the Company procedures for fall rescue.
3. A Competent Rescuer will be trained and have overall program responsibility on the project. A Competent Rescuer is a person specifically trained in fall rescue and able to make appropriate decisions or know when to obtain a higher level of assistance.
4. Authorized Rescuers are those workers at affected projects who would assist in a fall rescue and trained by the Competent Rescuer on the project-specific written fall rescue plan.
5. Once a fall rescue is needed, in conjunction with the emergency 911 system activation, the Competent Rescuer shall be notified immediately and proper steps taken to initiate the proper rescue procedure (self-rescue or mechanically assisted rescue).
6. Workers shall be provided with and trained on proper use of suspension trauma straps.

7. Mechanical rescue equipment will be evaluated and utilized for each project, as needed. The Company Safety Manager will work with Competent Rescuers to ensure proper rescue equipment is available.
8. The nearest emergency response personnel (fire and rescue) will be notified of potential fall rescue situations prior to commencing work on all projects.

TRAINING

A safety training program will be provided for all employees who will be exposed to fall hazards in the work area (e.g. “riggers”), and will be conducted by Competent or Qualified personnel. The program will conform to ANSI standards Z359.2-2017 Minimum Requirements for a Comprehensive Managed Fall Protection Program, and Z490-1-2009 Criteria for Accepted Practices in Safety, Health, and Environmental Training, and include:

1. Nature of the fall hazards workers may be exposed to;
2. Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems;
3. Understanding of the Fall Protection Hierarchy; Elimination, Control and PFAS;
4. Inspection and storage procedures for fall protection equipment;
5. Use and operation of controlled access zones, guardrails, personal fall arrest systems, warning lines, and safety monitoring systems;
6. Role of each worker in the safety monitoring system (if one is used);
7. Fall rescue procedures;
8. Correct procedures for equipment and materials handling, and storage and erection of overhead protection;
9. Role of each worker in alternative fall protection plans (if used), and;
10. Requirements of the OSHA fall protection standard.

Authorized User Training

Fall Protection Authorization will be conducted prior to job assignment. RockForce will provide training to ensure that the purpose, function, and proper use of fall protection is understood by employees and that the knowledge and skills required for their safe application and usage is demonstrated by employees. The training will include the following as a minimum:

1. Requirements of the OSHA Fall Protection Standard, 29 CFR 1926, Subpart M;

2. Types of fall protection equipment appropriate for use;
3. Recognition of applicable fall hazards associated with the work to be completed and the locations of such;
4. Procedures for removal of protection devices from service for repair, destruction or replacement;
5. All other employees whose work operations are or may be in an area where fall protection devices may be utilized, will be trained to be aware of hazards associated with fall protection operations;
6. Equipment maintenance and inspection requirements;
7. Equipment donning and doffing procedures;
8. Equipment strengths and limitations;
9. Confirmation of proficiency with:
    a. Rope Management, 100% tie-off procedures, SRD usage and inspection, anchorage usage and inspection.

Competent Person Training

Along with all aspects of Authorized User Training, employees who are assigned Lead Rigger duties will be provided “Competent Person Training”. Training will be provided by a Qualified Person.

Certifications - RockForce will certify that employee training has been accomplished and is kept up to date. The certification will contain each employee's name and dates of training. Training will be initiated and documented by competent personnel. Employers will retain documentation.

Refresher training - This program will be provided to, and read by all employees receiving refresher training. The training content will be identical to initial training. Refresher training will be conducted when the following conditions are met, whichever event occurs sooner.

1. Retraining will be provided for all authorized and affected employees whenever (and prior to) a change in their job assignments, a change in the type of fall protection equipment used, or when a known hazard is added to the work environment which affects the Fall Protection Safety Program.
2. Additional retraining will also be conducted whenever a periodic inspection reveals, or whenever RockForce has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of fall protection equipment or procedures, or;
3. Whenever a fall protection procedure fails.

4. The retraining will reestablish employee proficiency and introduce new or revised methods and procedures, as necessary.
5. Employees will be trained in applicable rescue procedures before commencing work in which fall arrest is the method of control.
6. Employees will receive opportunities to practice Rescue procedures on a regular basis to ensure competence and familiarity with equipment use and maintenance.

Safety Contact Information

Please contact RockForce Management at any time for more information regarding safe working conditions, or if you have any safety related concerns or questions. Life Safety First!

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Safety and Education Manager

Name: Phil van Hest

Signature: 

Date: Oct 9, 2025

Safety Management or Risk Management

Name: _____

Signature: _____

Date: _____
