Fall Protection Program

The purpose of this fall protection program is to establish guidelines to protect all employees engaged in outdoor or indoor work activities that expose them to potential falls from elevations.

This fall protection program includes all institutional buildings and institutional staff and inmates. In particular those staff/inmates engaged in work activities, which exposes them to falls from heights of 6 feet or more. This Fall Protection Program has been developed to prevent the occurrence of falls from elevations of 6 feet or higher. This goal will be accomplished through effective education, engineering and administrative controls, use of fall protection systems, and enforcement of the program. This fall protection program will be continually improved upon to prevent all falls from occurring.

OSHA Guidelines

1. Employers must determine if walking/working surfaces meet certain requirements. (29 CFR 1926.501(a)(2)

2. Employees on a walking/working surface must be protected from falling under certain circumstances. (29 CFR 1926.501(b)(1)

3. Employees who are constructing leading edges or working nearby must be protected from falling. (29 CFR 1926.501 (b)(2)

4. Employees in a hoist area must be protected from falling. (29 CFR 1926.501 (b)(3)

5. Employees on walking/working surfaces with holes must be protected from falling. (29 CFR 1926.501 (b)(4)

6. Employees on the face of formwork or reinforcing steel must be protected from falling. (29 CFR 1926.501(b)(5)

7. Employees on ramps, runways, and other walkways must be protected from falling. (29 CFR 1926.50(1)(b)(6)

8. Employees at the edge of excavations must be protected from falling. (29 CFR 1926.501 (b)(7)

9. Employees above dangerous equipment must be protected from failing. (29 CFR 1926.501 (b)(8)

10. Employees performing overhand bricklaying and related work must be protected from falling. (29 CFR 1926.501 (b)(9)

11. Employees engaged in roofing activities on low slope roofs must be protected from falling. (29 CFR 1926.501 (b)(10)

12. Employees on a steep roof must be protected from falling. (29 CFR 1926.50 (b)(11)

13. Employees engaged in the erection of pre-cast concrete members must be protected from falling. (29 CFR 1926.501(b)(12)

14. Employees engaged in residential construction must be protected from falling. (29 CFR 1926.501(b)(13)

15. Employees working on, at, above, or near wall openings must be protected from falling. (29 CFR 1926.501(b)(13)

16. Employers must provide protection from falling objects. (29 CFR 1926.501 (c)

Sample Fall Protection Program

FALL PROTECTION
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FALL PROTECTION PROGRAM

Purpose

The purpose of this fall protection program is to establish guidelines to protect all employees engaged in outdoor or indoor work activities that expose them to potential falls from elevations.

This fall protection program includes all institutional buildings and institutional staff and inmates. In particular those staff/inmates engaged in work activities, which exposes them to falls from heights of 6 feet or more. This Fall Protection Program has been developed to prevent the occurrence of falls from elevations of 6 feet or higher. This goal will be accomplished through effective education, engineering and administrative controls, use of fall protection systems, and enforcement of the program. This fall protection program will be continually improved upon to prevent all falls from occurring.

OSHA Guidelines

1) Employers must determine if walking/working surfaces meet certain requirements. **(29 CFR 1926.501(a)(2)**

   Has employer determined if the walking/working surfaces on which employees are working have the strength and structural integrity to support employees safely?

   Verify that employees are allowed to work **only** on those surfaces that have the requisite strength and structural integrity.

2) Employees on a walking/working surface must be protected from falling under certain circumstances. **(29 CFR 1926.501(b)(1)**

   Verify that each employee on a walking/working surface (horizontal and vertical) with an unprotected side or edge that is 6 ft or more above a lower level is protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

3) Employees who are constructing leading edges or working nearby must be protected from falling. **(29 CFR 1926.501 (b)(2)**

   Verify that each employee who is constructing a leading edge that is 6 ft or more above lower levels is protected from failing by the use of guardrail systems, safety net systems, or personal fall arrest systems.

   ALSO: When an employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer must develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k). However, there is a presumption that it is feasible and will not create a greater hazard to implement at least one of the abovelisted fall protection systems; accordingly, the burden of proof is on the employer to establish that it is appropriate to implement the fall protection plan only.

Verify that each employee on a walking/working surface 6 ft or more above a lower level where leading edges are under construction, but who is not engaged in the leading edge work, is protected from falling by a guardrail system, safety net system, or personal fall arrest system.

4) Employees in a hoist area must be protected from falling. **(29 CFR 1926.501 (b)(3)**

   Verify that each employee in a hoist area is protected from failing 6 ft or more to lower levels by guardrail systems or personal fall arrest systems.

   Review work practices to verify that if chains, gates, Guardrail systems, or portions thereof are removed to facilitate the hoist (e.g., during landing of materials), and if an employee must lean through the access opening or out over the edge (e.g., to receive or guide materials), then the employee is protected from fall hazards by a personal fall arrest system.

5) Employees on walking/working surfaces with holes must be protected from falling. **(29 CFR 1926.501 (b)(4)**

   Verify that each employee on walking/working surfaces is protected from falling through holes (including skylights) more than 6 ft above lower levels by personal fall arrest systems or covers or Guardrail systems erected over or around such holes.

   Verify that each employee on a walking/working surface is protected from tripping in or stepping into or through holes (including skylights) by covers.

   Verify that each employee on a walking/working surface is protected from objects falling through holes (including skylights) by covers.

6) Employees on the face of formwork or reinforcing steel must be protected from falling. **(29 CFR 1926.501(b)(5)**

   Verify that each employee on the face of formwork or reinforcing steel is protected from falling 6 ft or more to lower levels by personal fall arrest systems, safety net systems, or positioning device systems.

7) Employees on ramps, runways, and other walkways must be protected from falling. **(29 CFR 1926.50(1)(b)(6)**

   Verify that each employee on ramps, runways, and other walkways is protected from falling 6 ft or more to lower levels by guardrail systems.

8) Employees at the edge of excavations must be protected from falling. **(29 CFR 1926.501 (b)(7)**

   Verify that each employee at the edge of excavations 6 ft or more in depth is protected from falling by guardrail systems or fences or, when the excavations are not readily seen because of plant growth or other visual barrier, by barricades.

Verify that each employee at the edge of a well, pit, shaft, and similar excavation 6 ft or more in depth is protected from failing by Guardrail systems, fences, barricades, or covers.

9) Employees above dangerous equipment must be protected from failing. **(29 CFR 1926.501 (b)(8)**

   Verify that each employee less than 6 ft above dangerous equipment is protected from failing into or onto the equipment by Guardrails systems or by equipment guards.

   Verify that each employee 6 ft (1.8 m) or more above dangerous equipment is protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems.

10) Employees performing overhand bricklaying and related work must be protected from falling. **(29 CFR 1926.501 (b)(9)**

    Except as provided otherwise in 29 CFR 1926.501 (b), verify that each employee performing bricklaying and related work 6 ft or more above lower levels is protected from failing by guardrail systems, safety net systems, or personal fall arrest systems or that the work is in a controlled access zone (CAZ).

    Review work practices to verify that employees reaching more than 10 inches below the level of the walking/working surface on which they are working are protected from falling by a guardrail system, safety net system, or personal fall arrest system.

11) Employees engaged in roofing activities on low slope roofs must be protected from falling. **(29 CFR 1926.501 (b)(I 0)**

    Except as provided otherwise in 29 CFR 1926.501 (b), verify that each employee engaged in roofing activities on lowsloped roofs, with unprotected sides and edges 6 ft or more above lower levels is protected from falling, by any of the following:

    i) guardrail systems; safety net systems; personal fall arrest systems;
    ii) a combination of a warning line system and guardrail system;
    iii) a combination of a warning line system and safety net system;
    iv) a combination of a warning line system and personal fall arrest system;
    v) a combination of a warning line system and safety monitoring system; or
    vi) a safety monitoring system alone (on roofs 50 ft or less in width only).

12) Employees on a steep roof must be protected from falling. **(29 CFR 1926.50 (b)(11)**

    Verify that each employee on a steep roof with unprotected sides and edges 6 ft or more above lower levels is protected from failing by guardrail systems with toe boards, safety net systems, or personal fall arrest systems.

13) Employees engaged in the erection of pre-cast concrete members must be protected from falling. **(29 CFR 1926.501(b)(12)**

Verify that each employee who is engaged in the erection of pre-cast concrete members (including but not limited to the erection of wall panels, columns beams, and floor and roof "tees") and related operations (such as grouting of pre-cast concrete members) and who is 6 ft or more above lower levels is protected from failing by any of the following (unless 29 CFR 1926.501 (b) provides for an alternative fall protection measure):

i) guardrail systems;
ii) safety net systems; or
iii) personal fall arrest systems.

ALSO: When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer can develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k). However, there is a presumption that it is feasible and will not create a greater hazard to implement at least one of the above listed fall protection systems, accordingly, the burden of proof is on the employer to establish that it is appropriate to implement the fall protection plan only.

14) Employees engaged in residential construction must be protected from falling. **(29 CFR 1926.501(b)(13)**

Verify that each employee engaged in residential construction who is 6 ft or more above lower levels is protected from failing by any of the following (unless 29 CFR 1926.501(b) provides for an alternative fall protection measure):

i) guardrail systems;
ii) safety net systems; or
iii) personal fall arrest systems.

ALSO: When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer can develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k). However, there is a presumption that it is feasible and will not create a greater hazard to implement at least one of the above listed fall protection systems; accordingly, the burden of proof is on the employer to establish that it is appropriate to implement the fall protection plan only.

15) Employees working on, at, above, or near wall openings must be protected from falling. **(29 CFR 1926.501(b)(13)**

If there are wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 ft or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface, then verify that each employee working on, at, above, or near such openings is protected from falling by any of the following:

i) guardrail systems;
ii) safety net systems; or
iii) personal fall arrest systems.

16) Employers must provide protection from falling objects. **(29 CFR 1926.501 (c)**

Verify that when employees are exposed to failing objects, the employer has each employee wear a hard hat and implements one of the following actions:

i) erects toe boards, screens, or guardrail systems to prevent objects from falling from higher levels;
ii) erects a canopy structure and keeps potential fall objects far enough from the edge of the higher level so that objects will not go over the edge if they are accidentally displaced; or
iii) barricades the area to which objects could fall, prohibits employees from entering the barricaded area, and keeps objects that may fall far enough away from the edge of the higher level so that those objects will not go over the edge if they are accidentally displaced.

Types of Fall Protection Systems

1) Articulating man lifts provided with a restraint system and full body harness to an anchor point below the waist (preferably at the floor level).
2) Guardrails with toeboards.
3) Personal fall arrest systems.

- Anchor points (rated at 5,000 pounds).
- Full body harness.
- Restraint line or lanyard.
- Shock absorbing lanyard.
- Retractable lanyard.
- Rope grabs.
- Connectors (self-locking snaphooks).

4) Engineered lifelines.
5) Warning lines.
6) Safety nets.
7) Safety monitor systems.

Appropriate fall protection will be determined by the task (job) to be performed.

Fall Protection Locations

Fall protection is required wherever the potential to fall 6 feet or more exists. The following Oakhill Correctional Institution locations have been identified for fall protection:

1. All flat and low sloped roof locations when within 6 feet of the roof edge or during roof repair/maintenance (4:12 pitch or less).

2. All exterior and interior equipment platforms, catwalks, antennas/towers, etc.

3. All exterior and interior fixed ladders above 20 feet.

4. All mezzanine and balcony edges.

5. All open excavations or pits.

6. All tasks requiring use of the articulating man lifts.

7. All tasks requiring employees to lean outside the vertical rails of ladders (i.e., painting, stairwell lightbulb replacement, etc.).

8. Scaffolding erection - 10 feet in height or greater.

9. Tuckpointing - chimney repair.

10. Gym-mezzanine/catwalk areas - whenever an employee must step outside the catwalk, additional fall protection (i.e., 6-foot lanyard to full body harness, SRL, or rope grab system) should be used.

Fall protection is not needed if an employee or employees are on a low slope roof (less than 4/12 pitch) for **inspection/observation only!**

Fall Protection Guidelines - Options

Engineering Controls

This should always be our first option for selection whenever possible (i.e., light bulb changing, telescoping arm, changing valve, relocate at ground level) or utilizing a contractor in extremely hazardous areas.

Guardrails

On all projects, only guardrails made from steel, wood, and wire rope will be acceptable. All guardrail systems will comply with the current Department of Commerce OSHA standards (i.e., withstand 200 pounds of force, 42" high, midrail, and toeboard). These guardrails will be placed in the following areas if necessary or feasible based on job location or requirements:

1. On all open sided floors.
2. Around all open excavations or pits.
3. On leading edges of roofs or mezzanines.

See Appendix B for guidelines on guardrails

Personal Fall Protection Systems

All employees on any project that will be required to wear a personal fall arrest or restraint system will follow these guidelines:

1) A full body harness will be used at **all** times.
2) **All personal fall arrest systems will be inspected before each use by the employee.** Any deteriorated, bent, damaged, impacted and/or harness showing excessive wear will be removed from service.
3) Connectors will be inspected to ensure they are drop forged, pressed, or formed steel or are made of equivalent materials **and** that they have a corrosion resistant finish as well as that all surfaces and edges are smooth to prevent damage to interfacing parts of the system.
4) Verify that D rings and snap hooks have a minimum tensile strength of 5,000 lbs and that the D rings and snap hooks are proof tested to a minimum tensile load of 3,600 lbs without cracking, breaking, or taking permanent deformation.
5) Only shock absorbing lanyards or retractable lanyards are to be used so as to keep impact forces at a minimum on the body (fall arrest systems).
6) Only nylon rope or nylon straps with locking snaphooks are to be used for restraints.
7) All lanyards will have self-locking snaphooks.
8) Verify that unintentional disengagement of snap hooks is prevented by either of the following means:
   a) Snap hooks are a compatible size for the member to which they are connected.
   b) Locking type snap hooks are used.

Effective January 1, 1998, only locking type snap hooks may be used.

Verify that unless the snap hook is a locking type and is designed for the following connections, snap hooks are not engaged in the following manners:

i) directly to webbing,, rope, or wire rope;
ii) to each other;
iii) to a D ring to which another snap hook or other connector is attached; to a horizontal lifeline;
iv) or to any object that 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.

The maximum free fall distance is not to exceed **6 feet**. Consideration must be given to the total fall distance. The following factors can affect total fall distance:

1. Length of connecting means (i.e., lanyard length, use of carabiners, snaphooks, etc.).
2. Position and height of anchorage relative to work platform/area (always keep above head whenever possible).
3. Position of attachment and D-ring slide on the full body harness.
4. Deployment of shock absorber (max 42").
5. Movement in lifeline.
6. Initial position of worker before free fall occurs (i.e., sitting, standing, etc.).

Calculating Total Fall Distance

It is the total length of shock absorbing lanyard + height of the person + the location distance of the D-ring from the work surface or platform. (See attached diagram in Addendum 1.)

Always allow a minimum of 6 feet of clearance above the ground, equipment, etc., at the end of the fall from the fall arrest point.

Engineered Lifeline

Lifeline systems must be designed and approved by an engineer or qualified person.

Lifeline systems must be engineered to have appropriate anchorages, strength of line designed to hold X number of individuals connected to it, line strength to aid in the arrest of a fall, and durability to hold a fallen employee(s) suspended until rescue can occur.

See Appendix C for guidelines on lifelines.

Warning Line System

All greater than 50 feet wide flat roof (i.e., roof with less than 4/12 slope) work which is performed 6 feet or further back from the edge of the roof can be completed by installing a Warning Line and using a safety monitor. If the roof is flat and less than 50 feet wide, a competent person safety monitor may be used. Warning Lines will consist of the following:

1. Will be erected 6 feet from the edge of the roof.
2. Be constructed of stationary posts made of wood or metal.
3. Wire or nylon rope and "Caution" tape will be strung from post to post and must be able to withstand 16 pounds of force.
4. The entire perimeter of the roof where work is being performed will be guarded by the warning line.

If an employee must access an area within 6 feet of the roof for reasons *other than* exiting the roof via a ladder or fixed industrial ladder, another employee must monitor that individual and warn him/her of any dangers. If another employee is not available to act as a safety monitor, then the employee must don a full body harness and attach a fall restraint lanyard to an anchor point to prevent reaching the edge of the roof.

Inspection of Fall Protection Systems:

The following criteria will be utilized to maintain all equipment in good working condition. Please note that there are inspection forms for the various equipment listed below in the attached addendum 2.

Full Body Harnesses

1) Inspect before each use.
   - Closely examine all of the nylon webbing to ensure there are no burn marks, which could weaken the material.
   - Verify there are no torn, frayed, broken fibers, pulled stitches, or frayed edges anywhere on the harness.
   - Examine D-ring for excessive wear, pits, deterioration, or cracks.
   - Verify that buckles are not deformed, cracked, and will operate correctly.
   - Check to see that all grommets (if present) are secure and not deformed from abuse or a fall.
   - Harness should never have additional punched holes
   - All rivets should be tight, not deformed.
   - Check tongue/straps for excessive wear from repeated buckling.
2) Annual inspection of all harnesses will be completed by a *competent person*, documentation will be maintained on file (see Addendum 2).
3) Storage will consist of hanging in an enclosed cabinet, to protect from damage.

4) All harnesses that are involved in a fall will be destroyed.

Lanyards/Shock Absorbing Lanyards:

1) Inspect before each use.
   - Check lanyard material for cuts, burns, abrasions, kinks, knots, broken stitches and excessive wear.
   - Inspect the snaphooks for hook, locks, and eye distortion.
   - Check carabiner for excessive wear, distortion, and lock operation.
   - Ensure that all locking mechanisms seat and lock properly.
   - Once locked, locking mechanism should prevent hook from opening.
   - Visually inspect shock absorber for any signs of damage, paying close attention to where the shock absorber attaches to the lanyard.
   - Verify that points where the lanyard attaches to the snaphooks are free of detects.
2) Annual inspection of all lanyards will be completed by a competent person, documentation will be maintained (see Addendum 2).
3) Storage will consist of hanging in an enclosed cabinet, to protect from damage.
4) All lanyards that are involved in a fall will be destroyed.

Snaphooks:

1) Inspect before each use.
   - Inspect snaphook for any hook and eye distortions.
   - Verify there are no cracks, pitted surfaces, and eye distortions.
   - The keeper latch should not be bent, distorted, or obstructed.
   - Verify that the keeper latch seats into the nose without binding.
   - Verify that the keeper spring securely closes the keeper latch.
   - Test the locking mechanism to verify that the keeper latch locks properly.
2) Annual inspection of all snaphooks will be completed by a competent person, documentation will be maintained (see Addendum 2).
3) All snaphooks involved in a fall will be destroyed.

Self-Retracting Lanyards

1) Inspect before each use.
   - Visually inspect the body to ensure there is no physical damage to the body.
   - Make sure all back nuts or rivets are tight.
   - Make sure the entire length of the nylon strap is free of any cuts, burns, abrasions, kinks, knots, broken stitches, and excessive wear and retracts freely.
   - Test the unit by pulling sharply on the lanyard to verify that the locking mechanism is operating correctly.

- If manufacturer requires, make certain the retractable lanyard is returned to the manufacturer for scheduled annual inspections.

2) Monthly inspection will be conducted by a competent person with documentation maintained (see Addendum 2).
3) Service per manufacturer specifications (1-2 years).
4) Inspect for proper function after every fall.

Tie-off Adaptors/Anchorages

1. Inspect for integrity and attachment to solid surface.
2. Annual inspection of all tie-offs and anchorages by a competent person with documentation.
3. All tie-offs and anchorages will be destroyed and replaced after a fall.

Articulating Man Lift

1. Inspect before each use.
2. Inspect/service per manufacturer guidelines. Forklift, scissors lifts, and safety nets will be inspected at the beginning of each shift in use. Structural integrity or forklift basket will be checked per same schedule.
3. Annual inspection of forklift basket will be completed by competent person with documentation maintained.

Horizontal Lifelines

1. Inspect before each use for structural integrity of line and anchors.
2. Annual inspection by competent person.

Guardrails

1. Temporary systems - Daily visual inspection will be competed by a competent person.
2. Temporary systems - Weekly, a complete structural inspection will be completed by a competent person.
3. Permanent Systems - Annual structural inspection will be completed by a competent person with future frequency of inspection defined based on conditions/controls present.

Storage and Maintenance of Fall Protection Equipment

1. Never store the personal fall arrest equipment in the bottom of a tool box, on the ground, or outside exposed to the elements (i.e., sun, rain, snow, etc.).
2. Hang equipment in a cool dry location in a manner that retains its shape.
3. Always follow manufacturer recommendations for inspection.
4. Clean with a mild, nonabrasive soap, and hang to dry.
5. Never force dry or use strong detergents in cleaning.
6. Never store equipment near excessive heat, chemicals, moisture, or sunlight.
7. Never store in an area with exposures to fumes or corrosives elements.
8. Avoid dirt and build-up on equipment.
9. Never use this equipment for any purpose other than personal fall arrest.
10. Once exposed to a fall, remove equipment from service immediately.

Training

Employers must provide a fall prevention training program for each employee who might be exposed to fall hazards. The training program must include recognition of the hazards of failing and procedures to follow to minimize these hazards. Training materials must be reviewed to verify that each employee has been trained, as necessary, by a competent person qualified in the following areas:

a) the nature of fall hazards in the work area;
b) the correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
c) the use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, CAZS, and other protection to be used;
d) the role of each employee in the safety monitoring system when this system is used;
e) the limitations on the use of mechanical equipment during the performance of roofing work on low sloped roofs;
f) the correct procedures for the handling and storage of equipment and materials and the erection of overhead protection;
g) the role of employees in fall protection plans;
h) the requirements contained in 29 CFR 1926 Subpart M.

i) understanding and following all components of this fall protection program and identifying the enforceable Department of Commerce/OSHA standards and ANSI standards that pertain to fall prevention.

Employers must maintain a written certification record for employee training. The record must contain the following information:

a) the name or other identity of the employee trained
b) the date(s) of the training; and
c) the signature of the person who conducted the training or the signature of the employer.

ALSO: If the employer relies on training conducted by another employer or completed prior to August 9, 1994, the certification record must indicate the date the employer determined the prior training was adequate rather than the date of actual training.

When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by 29 CFR 1926.503(a) , the employer must retrain that employee. Retraining is required at least in the following circumstances:

a) changes in the workplace render previous training obsolete;
b) changes in the types of fall protection systems or equipment to be used render previous training obsolete; or
c) inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.

Enforcement

1. Subject to discipline.
2. Documentation of any violations will be kept in the staff member’s personnel file.
3. Any employee not following the fall protection program, or a portion of this procedure will be subject to disciplinary action.

Rescue Procedures

Rescue Methods/Options of Fallen Personnel

In the unlikely event that a fall arrest occurs, all employees will be rescued by on-site personnel with the use of an articulating man lift or ladders where feasible. Alternate rescue would be through the local emergency services.

Communication Issues

In the event of a fall, the following people will be notified as soon as possible:

1. Rescue personnel (i.e., maintenance personnel).

2. Security shift supervisor/maintenance supervisor.
3. Fire Department or emergency medical services if necessary.
4. Associate wardens and safety coordinators.

At the beginning of any work activity where fall protection is an issue, *rescue plans must be identified* and discussed with all employees in case of a fall. The maintenance supervisor will develop the rescue plan(s).

All employees involved in a fall arrest or fall will be sent for a medical evaluation to determine extent of injuries, if any.

Fall Investigation

All fall investigations will be conducted by the maintenance supervisor, safety coordinator and, if necessary, the associate wardens.

The following documentation will be completed as part of the fall investigation:

1. Interviews with staff and witnesses.
2. Employee injury/accident report.
3. Supervisory injury/accident report.

Program Evaluation

This fall protection program will be evaluated periodically to determine effectiveness. The following criteria will be used to evaluate its performance:

1. Accident reports, number of accidents.
2. Management/staff compliance with program components.
3. Periodic on-site audits.
4. Staff feedback, interviews.

Contractors

All outside contractors working in or on the premises of (insert name of your organization) will be required to follow the guidelines set forth in this fall protection program. Contractors in the pre-job meeting will be informed of these requirements as well as the on-site construction rules that apply.

Note: This document was created with the help of sources on the Oregon OSHA website and the Seton Resource Center (http://www.setonresourcecenter.com).

APPENDIX A

Definitions

Authorized Person: A person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or job site, i.e., building maintenance, roof repair, etc.

Competent Person: A person capable of identifying existing and predictable hazards in the surroundings or working conditions which are hazardous or dangerous to employees and who has the authorization to take prompt corrective action to eliminate them.

Qualified Person: An individual, 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 problem relating to the subject matter, work, or project.

Anchor Point: A secure point of attachment for lifelines, lanyards, or deceleration devices. An anchor point must be capable of supporting at least 5,000 pounds (3,600 pounds if engineered/certified by a qualified person) per person and must be independent of any anchorage being used to support or suspend platforms.

Full Body Harness: Webbing/straps which are secured about an employee's body 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, preferably at the shoulders and/or middle of the back.

Connector: A device which is used to couple (connect) parts of the personal fall arrest system together.

Deceleration Device: Any mechanism, such as a rope grab, rip-stitch lanyard, a 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.

Deceleration Distance: The additional vertical distance a falling employee 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 an employee's body harness attachment point at the moment of activation of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

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 point on the employee's body harness between the onset of the fall, and just before the system begins to apply

force to arrest the fall. Free fall distance must not exceed 6 feet. **This distance excludes deceleration distance and lifeline/lanyard elongation distance.**

Total Fall Distance: The maximum vertical change in distance from the bottom of an individual's feet at the onset of a fall, to the position of the feet after the fall is arrested - including free fall distance and deceleration distance.

Guardrail System: A barrier erected to prevent employees from falling to lower levels. This system includes a midrail and toeboard able to withstand 200 pounds applied to the top rail in any direction.

Lanyard: A flexible line of rope or strap that has self-locking snaphook connectors at each end for connecting to body harnesses, deceleration devices, and anchor points.

Leading Edge: The edge of a floor, roof, or other walking/working surface, which changes location as additional floor, roof, etc., is placed or constructed. A leading edge is considered an unprotected side or edge when not under active 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.

Low-slope roof: A roof having a slope of less than or equal to 4 in 12 (vertical to horizontal). Approximately a roof with a 19.5 degree slope or less.

Personal Fall Arrest System: A system used to arrest (catch) an employee in a fall from a working level. It consists of an anchorage location, connectors, a body harness, and may include a lanyard, deceleration device, lifeline, or any combination of the before-mentioned items.

Rope Grab: A deceleration device, which travels on a lifeline and automatically, by friction, engages the lifeline and locks to arrest the fall of an employee.

Roof Work: The hoisting, storage, installation, repair, and removal of materials or equipment on a roof.

Safety Monitoring System: A safety system in which a competent person is responsible for recognizing and warning employees of fall hazards. All other fall protection systems must be deemed "infeasible" (through infeasibility study/review) to select/use a safety monitoring system.

Snaphook: A connector comprised of a hook-shaped member with a closed keeper which may be opened to permit the hook to receive an object and when released, automatically closes to retain the object. Snaphooks must be self-closing with a self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection, thus preventing the opportunity for the object to "rollout" of the snaphook.

Steep Roof: A roof having a slope greater than 4 in 12 (vertical to horizontal). A roof with a slope greater than 19.5 degrees.

Toeboard: A low protective barrier that will prevent the fall of materials and equipment to lower levels, usually 4" or greater in height.

Unprotected Sides and Edges: Any side or edge of a walking or working surface, e.g., floor, roof, ramp, runway, etc., where there is no guardrail at least 39 inches high.

Warning line system: A barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which work can be conducted without the use of guardrails, personal fall arrest systems, or safety nets to protect employees in the area. This will be utilized on any roof greater than 50" wide and in conjunction with a safety monitor only where the other forms of fall protection have been deemed infeasible to use.

APPENDIX B

OSHA GUIDELINES ON GUARDRAILS - 29 CFR 1926.502(b)

Verify that the top edge of top rails or equivalent guardrail system members is 42 inches ± 3 inches above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45inch limit, provided the guardrail system meets all other criteria.

ALSO: When employees are using stilts, the height of the top edge of the top rail or equivalent member must be increased an amount equal to the height of the stilts.

Verify that mid rails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members are installed between the top edge of the guardrail system and the walking/working, surface when there is no wall or parapet wall at least 2 1 inches high. Mid rails and other intermediate structural members must meet the following requirements:

1) When used, mid rails must be installed midway between the top edge of the guardrail system and the walking/working level.

2) When used, screens and mesh must extend from the top rail to the walking,/working level and along the entire opening between top rail supports.

3) When used between posts, intermediate members (such as balusters) must be not more than 19 inches apart.

4) Other structural members (such as additional mid rails and architectural panels) must be installed such that there are no openings in the guardrail system that are more than 19 inches wide.

5) Verify that all Guardrail systems are capable of withstanding, without failure, a force of at least 200 lb applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge.

6) Verify that when the 200 lb test load is applied in a downward direction, the top edge of the guardrail does not deflect to a height less than 39 inches above the walking/working level. (Guardrail system components selected and constructed in accordance with Appendix B to 29 CFR 1926 Subpart M meet this requirement.)

7) Verify that mid rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members are capable of withstanding, without failure, a force of at least 150 lb applied in any downward or outward direction at any point along the mid rail or other member.

8) Verify that guardrail systems are surfaced to prevent injury to an employee from punctures or lacerations and to prevent snagging of clothing.

9) Verify that the ends of all top rails and mid rails do not overhang the terminal posts.

10) Verify that steel banding and plastic banding are not used as top rails or mid rails.

11) Verify that manila, plastic, or synthetic rope being used for top rails or mid rails is inspected as frequently as necessary to verify that it continues to meet the strength requirements of 29 CFR 1926.502(b)(3).

12) Verify that top rails and mid rails are at least 0.25 inch nominal diameter or 0.25 inch thick to prevent cuts and lacerations.

13) If wire rope is used for top rails, verify that it is flagged at not more than 6ft intervals with high visibility material.

14) When guardrail systems are used at hoisting areas, verify that a chain, gate, or removable Guardrail section is placed across the access opening between guardrail sections when hoisting operations are not taking place.

15) When guardrail systems are used at holes, verify that they are erected on all unprotected sides or edges of the hole.

16) When guardrail systems are used around holes used for the passage of materials, verify that the hole has not more than two sides provided with removable Guardrail sections to allow the passage of materials. When the hole is not in use, it must be closed over with a cover or a guardrail system must be provided along all unprotected sides or edges.

17) When Guardrail systems are used around holes that are used as points of access (such as ladder ways), verify that they are provided with a gate, or are so offset that a person cannot walk directly into the hole.

18) Verify that Guardrail systems used on ramps and runways are erected along each unprotected side or edge.

APPENDIX C

Lifeline Requirements - 29 CFR 1926.502(d)(7) to (d)(14)

1) Verify that on suspended scaffolds or similar work platforms with horizontal lifelines that may become vertical lifelines, the devices used to connect to a horizontal lifeline are capable of locking in both directions on the lifeline.

2) Verify that horizontal lifelines are 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 2.

3) Verify that lanyards and vertical lifelines have a minimum breaking strength of 5,000 lbs.

4) Verify that when vertical lifelines are used, each employee is attached to a separate lifeline.

ALSO: During the construction of elevator shafts, two employees may be attached to the same lifeline in the hoist way, provided that all of the following conditions are met:

   a) Both employees are working atop a false car that is equipped with guardrails.
   b) The strength of the lifeline is 10,000 lbs (5,000 lbs per employee attached).
   c) All other criteria specified in this paragraph for lifelines have been met.
   d) Verify that lifelines are protected against being cut or abraded.

5) Verify that self retracting lifelines and lanyards that automatically limit free fall distance to 2 ft or less are capable of sustaining a minimum tensile load of 3,000 lbs applied to the device with the lifeline or lanyard in the fully extended position.

6) Verify that self retracting lifelines and lanyards that do not limit free fall distance to 2 ft or less, rip stitch lanyards, and tearing and deforming lanyards are capable of sustaining a minimum tensile load of 5,000 lbs applied to the device with the lifeline or lanyard in the fully extended position.

7) Verify that ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses are made from synthetic fibers.

APPENDIX D
Fall Protection Checklist

	Yes	No
Has a written program for fall protection and training been established?		
Is the program reviewed on an annual basis?		
Are fall injuries tracked for program improvement?		
Have individual control procedures been developed for each known hazard?		
Has a fall hazard protection inventory of the facility been conducted?		
Are the individual fall hazard procedures reviewed on an annual basis?		
Do authorized employees inspect fall protection equipment?		
Do the procedures outline techniques to be used for fall protection?		
Is training routinely conducted before job assignment?		
Employees instructed in the purpose & use of the fall protection procedure?		
Does training include recognition of fall hazards?		
Is retraining required whenever there is a change in job assignments?		
- A change in fall protection requirements?		
- A change in the fall protection procedures?		
- When employee proficiency is in doubt?		
- When accidents or close calls occur?		
Are fall procedures shared between host and contractor?		
Are contractor safety considerations discussed during training?		
Do contractors notify affected employees of the hazards involved in work?		

APPENDIX E
FALL PREVENTION CHECKLIST

	Yes	No
Does all fall protection equipment meet or exceed the appropriate American National Standards Institute (ANSI) standard?		
Is fall protection used if ladders, walkways, work platforms, and open-sided floors do not comply with Occupational Safety and Health Administration (OSHA/COMM) regulations?		
Have all personnel exposed to a potential free fall > six feet received fall protection training?		
Are lanyards attached to prevent a free fall of six feet or more?		
Are approved attached points established and marked in areas where lifelines and lanyards are used regularly?		
Lifeline attach points are capable of supporting a load of 5,400 pounds.		
All fall protection equipment is being visually inspected for defects prior to each use. If there is evidence of excessive equipment wear or deterioration or if mechanical malfunction is detected, the item is being removed from service.		
Fall protection equipment and assemblies are being inspected according to the manufacturer's recommendations. Each belt and lanyard bears manufacturer identification marks.		
Personnel requiring the use of fall protection equipment employ the "Buddy System" or have an observer to render assistance when and if required.		
Is a trained observer present when personnel are performing work involving confined space entry?		
Stepladders are fully opened and the spreaders locked. The top two rungs are not being used for standing or sitting.		
Defective ladders are being tagged-out -"Out of Order" or "Do Not Use."		
All ladders are kept in good condition and inspected regularly.		

APPENDIX F
Training record

The following employees have been trained to recognize fall hazards and to use appropriate fall-protection systems and methods to minimize exposure to the hazards.

Name of employee trained Date employee was trained Trainer's signature

Name of Employee	Date Employee was trained	Trainer's Signature

APPENDIX G
Fall-protection systems checklist

Use this checklist to identify the fall-protection system training each worker received at your worksite.

Name of worker:_____

Fall-protection system	**Training received**				
	N/A	**Installation**	**Maintenance**	**Inspection**	**Disassembly**
Guardrail systems					
Personal fall-arrest systems					
Safety net systems					
Controlled access zones					
Roof brackets					
Covers					
Fences and barricades					
Safety monitoring systems					

APPENDIX I
Fall-hazard checklist

Use this checklist to identify fall-hazard areas at your worksite.

Check all boxes that apply. Check "**Yes**" if hazards exist at your worksite; check "**N/A**" if not.

Hazard	Yes	N/A
Hoist areas		
Holes		
Formwork		
Rebar		
Runways		
Excavations		
Dangerous equipment		
Overhead bricklaying		
Floor joists and trussing		
Floor sheathing		
Erecting exterior walls		
Roof trussing and raftering		
Roof sheathing		
Roofing		
Wall openings		
Falling objects		

Appendix J

CHECKLIST FOR INSPECTING WALKING-WORKING SURFACES

General Work Environment

	Is a documented, functioning housekeeping program in place?
	Are all worksites clean, sanitary, and orderly?
	Are work surfaces kept dry or is appropriate means taken to assure the surfaces are slip-resistant?
	Are all spilled hazardous materials or liquids, including blood and other potentially infectious materials, cleaned up immediately and according to proper procedures?
	Is combustible scrap, debris and waste stored safely and removed from the worksite properly?
	Is all regulated waste, as defined in the OSHA bloodborne pathogens standard (1910.1030), discarded according to federal, state, and local regulations?
	Are accumulations of combustible dust routinely removed from elevated surfaces including the overhead structure of buildings, etc.?
	Is combustible dust cleaned up with a vacuum system to prevent the dust from going into suspension?
	Is metallic or conductive dust prevented from entering or accumulating on or around electrical enclosures or equipment?
	Are covered metal waste cans used for oily and paint-soaked waste?

Walkways

	Are aisles and passageways kept clear?
	Are aisles and walkways marked as appropriate?
	Are wet surfaces covered with non-slip materials?
	Are holes in the floor, sidewalk or other walking surface repaired properly, covered or otherwise made safe?
	Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operating?
	Are materials or equipment stored in such a way that sharp projectives will not interfere with the walkway?
	Are spilled materials cleaned up immediately?
	Are changes of direction or elevation readily identifiable?
	Are aisles or walkways that pass near moving or operating machinery, welding operations or similar operations arranged so employees will not be subjected to potential hazards?
	Is adequate headroom provided for the entire length of any aisle or walkway?
	Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground?
	Are bridges provided over conveyors and similar hazards?

Floor and Wall Openings

	Are floor openings guarded by a cover, a guardrail, or equivalent on all sides (except at entrance to stairways or ladders)?

	Are toeboards installed around the edges of permanent floor openings (where persons may pass below the opening)?
	Are skylight screens of such construction and mounting that they will withstand a load of at least 200 pounds?
	Is the glass in the windows, doors, glass walls, etc., which are subject to human impact, of sufficient thickness and type for the condition of use?
	Are grates or similar type covers over floor openings such as floor drains of such design that foot traffic or rolling equipment will not be affected by the grate spacing?
	Are unused portions of service pits and pits not actually in use either covered or protected by guardrails or equivalent?
	Are manhole covers, trench covers and similar covers, plus their supports designed to carry a truck rear axle load of at least 20,000 pounds when located in roadways and subject to vehicle traffic?
	Are floor or wall openings in fire resistive construction provided with doors or covers compatible with the fire rating of the structure and provided with a self-closing feature when appropriate?

Stairs and Stairways

	Are standard stair rails or handrails on all stairways having four or more risers?
	Are all stairways at least 22 inches wide?
	Do stairs have landing platforms not less than 30 inches in the direction of travel and extend 22 inches in width at every 12 feet or less of vertical rise?
	Do stairs angle no more than 50 and no less than 30 degrees?
	Are step risers on stairs uniform from top to bottom?
	Are steps on stairs and stairways designed or provided with a surface that renders them slip resistant?
	Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?
	Do stairway handrails have at least 3 inches of clearance between the handrails and the wall or surface they are mounted on?
	Where doors or gates open directly on a stairway, is there a platform provided so the swing of the door does not reduce the width of the platform to less than 21 inches?
	Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?
	Do stairway landings have a dimension measured in the direction of travel, at least equal to the width of the stairway?

Elevated Surfaces

	Are signs posted, when appropriate, showing the elevated surface load capacity?
	Are surfaces elevated more than 30 inches above the floor or ground provided with standard guardrails?
	Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard 4-inch toeboards?
	Is a permanent means of access and egress provided to elevated storage and work surfaces?
	Is required headroom provided where necessary?
	Is material on elevated surfaces piled, stacked or racked in a manner to prevent it from tipping, falling, collapsing, rolling or spreading?
	Are dock boards or bridge plates used when transferring materials between docks and trucks or rail cars?