

Section 20: FALL PROTECTION

INTRODUCTION

Employees who work or walk on elevated surfaces where there may be a fall hazard must have an approved form of protection from falls. Permanent types of protection, such as guardrails, walls, parapets, or covers for surface openings should typically be present. Construction, maintenance or inspection work may take workers to areas or situations where permanent protection is not present. In those cases, and any others, an adequate form of fall protection is required.

APPLICABILITY

This program applies to all King County employees who are exposed to:

- fall hazards of four (4) feet or more
- any significant openings in walking/working surfaces
- any height where there could be a fall onto projections, items or machinery that could cause serious injury

Exemptions to the four foot height are described below. If there is any conflict or overlap between this program with any other regulations or policies, the provision more protective of the employee and/or public safety shall apply. This program supplements, but does not replace, state regulations regarding fall protection and prevention.

All employees must be trained before being assigned to or allowed to go to any area of a work site that involves exposure to fall hazard, as defined by this program.

A written Fall Protection Work Plan is required where a fall hazard of 10 feet or greater exists.

RESPONSIBILITIES

Management

Department Directors, Division Managers and Section Managers oversee compliance, including providing adequate funding for training and equipment required by this program.

Supervisors and Leads

- Consult with the Safety and Claims Management office for technical assistance with more complex Fall Protection Plans
- Coordinate with Safety and Claims Management to arrange for required training for employees who may be exposed to fall hazards during

- construction or maintenance activities
- Maintain copies of training completion records
- Provide for refresher training when there is a change in the fall protection regulations, new fall protection equipment is purchased, and when any deficiencies are noted in the fall protection procedures
- Assist employees under their supervision in becoming familiar with and in adhering to all provisions of this program and any relevant regulations
- Require that a Fall Protection Work Plan is completed for each construction or maintenance-related activity where a fall potential of greater than 10 feet exists

Employees

- Follow the provisions of this program and all applicable Fall Protection Work Plans
- Daily inspect their assigned equipment prior to use at each job site
- Read and be familiar with manufacturers' operating manuals for all fall protection equipment they use
- Report immediately to their Supervisor or Crew Chief any fall protection equipment, facility, structure, or work practice that poses a fall hazard to themselves or other employees

Safety and Claims Management

- Coordinate with Supervisors and Leads to plan, schedule and implement training required according to this program.
- Provide technical assistance as requested to managers, supervisors or crew leads designing more complex Fall Protection Plans

DEFINITIONS

Construction Activity: Any activity that consists of the following: construction, alteration, demolition, and related inspection and/or maintenance and repair work. (If requirements of the fall protection regulations for construction conflict with regulations listed for general industry, the provisions of the Construction Safety Standards shall prevail during construction activities).

Fall Arrest System: A system designed to stop a free fall from elevation. A fall arrest system can be a personal fall arrest system worn by the employee, safety nets, or catch platform.

Fall Protection Work Plan: A written planning document which identifies all areas on the job site where a fall hazard of 10 feet or greater exists. The plan describes the methods of fall protection to be utilized to protect employees, and includes the procedures governing the installation, use, inspection, and removal of the fall protection method(s) selected by King County (see Attachment 1).

Fall Restraint System: An approved device and any necessary components that function together to restrain an employee in such a manner as to prevent that employee from falling. Fall restraint systems include guardrails, walls 39” or higher, or personal fall protection systems.

Personal fall arrest system: Restraint system with approved safety equipment components such as body harnesses, shock absorbing lanyards, deceleration devices, horizontal and/or vertical lifelines and anchorages, interconnected and rigged as to arrest a free fall. A body belt shall not be used as part of a personal fall arrest system. Properly designed and placed nets or catch platforms can be fall arrest systems.

Walking/Working Surface: Any surface, whether vertical or horizontal, on which an employee walks or works to perform his/her job duties including, but not limited to, floors, roofs, ramps, or bridges.

Wall Opening: An opening at least 30 inches in height and 18 inches wide, in any wall or partition, through which persons may fall, such as an opening for a window or chute.

REQUIRED USE

An appropriate type of fall protection is required for the following:

- Any walking/working surface with edges 4 feet or higher. Guardrails are required unless they are infeasible.
- Any walking/working surface of any height where there could be a fall onto projections, items or machinery that could cause serious injury. Guardrails are required unless they are infeasible.
- Openings or holes in walking/working surfaces must be covered or have guardrails.
- Wall openings, from which there is a drop of more than 4 feet, and the bottom of the opening is less than 39 inches above the working surface, shall be guarded.

Exceptions to the 4-foot rule, which require fall protection at 10 feet and higher apply to the following:

- For roof installation or maintenance work on low pitched roofs of 4-in-12 pitch or less. Personal fall arrest/restraint systems or a warning line system may be used.
- For top plate, structural steel, joist, truss installation/work or work on scaffolds.
- Leading edge work, where floor or roof surfaces are being attached and the height over the edge of the surface is 10 feet or more. Personal fall arrest/restraint systems or a warning line system may be used.

Personal fall arrest systems are required in articulated boom lifts and as required

by manufacturers of scissor lifts (usually scissor lifts that lift extraordinarily high).

PROCEDURES

Engineering Controls

Where feasible, fall hazards will be eliminated by installing temporary guardrails or covering floor openings.

Fall Protection Work Plan

A Fall Protection Work Plan shall be developed for any job task (construction or maintenance activity) that exposes an employee to a fall hazard of 10 or more feet. The Fall Protection Work Plan must be developed and evaluated on a site-by-site basis and shall address:

1. A brief description of the work site and location of all fall hazards in the affected work area
2. Description of the method of fall arrest or restraint to be provided
3. Description of the correct procedures for the assembly, maintenance, inspection and disassembly of the fall protection system to be used
4. Description of the correct procedures for the handling, storing, and securing of tools and materials
5. Description of the method of providing overhead protection for workers who may be in, or pass through, the area below the work site
6. Description of the rescue plan for prompt, safe removal of injured workers, including, but not limited to, the following:
 - a) Emergency telephone numbers for medical and rescue assistance
 - b) Site address and specific directions for getting to the site
 - c) Location of first-aid kit
 - d) Special equipment needed for rescue, such as cranes, ladders, etc.
 - e) Location and availability of personnel trained and competent in rescue procedures

Equipment

Each employee who is assigned to work in an area where there is a fall hazard of 10 feet or more shall be trained by their supervisor or lead on the specific equipment that will be used at that site, as identified in the fall protection work plan.

The manufacturer's written instructions on the use, inspection and maintenance of all fall protection equipment must be kept in a specific and easily-accessible location (e.g., the Crew office), and the employees must be aware of the instructions.

A Class III full body harness is the only personal fall protection device approved by this policy for fall arrest protection.

General Provisions

The Fall Protection Work Plan must be available on the job site for inspection by on-site workers, the Department of Labor and Industries, or Safety and Health Professionals.

If at any time an employee has a question concerning his/her safety in a fall hazard situation, the employee shall leave the area and discuss the concern with his/her Supervisor or Lead. If the employee feels unsafe in a situation requiring fall protection equipment, he/she should immediately discuss this concern with the supervisor and/or consult with Safety and Claims Management at **(206) 477-3350**.

Employees must receive training required by the fall protection program and be trained on the specific equipment used before performing work involving falling hazards. If employees are not trained in the use of fall protection equipment, they shall not work in areas in which a fall hazard exists.

TRAINING

Supervisors and Leads will coordinate with Safety and Claims Management to provide training for employees who may be exposed to fall hazards during construction activities. Supervisors and Leads shall maintain records of training.

Fall prevention and protection training shall include instructions on the following topics:

1. Types of fall hazards that may be encountered in the course of various field activities
2. Components of the written fall prevention and protection program
3. Components of the Fall Protection Work Plan form and instructions on how to

- complete a Fall Protection Work Plan form
4. Fall arrest and fall prevention equipment required, including its use, handling, storage, maintenance and inspection
 5. Procedures employees must follow in the event of a fall-related accident

RECORD KEEPING

Copies of all Fall Protection Work Plans, revisions to existing plans and training records shall be kept by supervisors or leads.

Fall Hazards: (check all that apply)

Roof:

- 1. Roof over 10' above next level _____
- 2. Flat or sloped with 4/12 pitch and under _____
- 3. Sloped with over 4/12 pitch _____
- 4. Leading edge work (within 6') _____

Openings:

- 5. Unguarded sides/edges _____
- 6. Skylights _____
- 7. Hatches _____
- 8. Shafts _____
- 9. Other _____

Access:

- 10. Roof Hatch _____
- 11. Portable ladder _____
- 12. Fixed ladder _____
- 13. Scaffolding _____
- 14. Powered personnel lift _____
- 15. Swing staging _____
- 16. Bosun chair _____

Other:

- 17. Potential overhead hazard _____
- 18. Electrical hazard _____
- 19. Other _____

Methods of Protection: (check all that apply)

- 1. Parapet walls 36-42" high _____
- 2. Guardrails _____
- 3. Top rail, mid rail, toe boards _____
- 4. Vertical/horizontal lifeline _____
- 5. Equip safety line/backstay _____
- 6. Lifeline/Backstay anchor points _____
- 7. Lanyard and harness _____
 - (a) Fall arrest _____
 - (b) Fall restraint _____
- 8. Warning line _____
- 9. Catch platforms/safety nets _____
- 10. Hard hats _____
- 11. Pedestrian barricades _____
- 12. Fully decked work surface _____
- 13. Fully decked overhead barrier _____
- 14. Guardrail screen barrier _____
- 15. Equipment tag/safety lines _____
- 16. Radio _____
- 17. Other _____

[If "other" is marked under Fall Hazards or Methods of Protection, provide a detailed description in Safety System or on an attached sheet.]

Engineering:

Does this job/building require design/engineering changes for safe work?

NO ____ YES ____

Installation Checklist:

- System and components installed _____
- Overhead hazard protection installed _____ Not required ____
- Electrical/Mechanical protection installed _____ Not required ____
- Designated loading area established _____ Not required ____
- Material storage 10 feet from perimeter _____
- System and components inspected _____
- Personal protection equipment inspected _____

Safety System:

(Describe system and component assembly, especially for a temporary installation.) _____

Overhead Hazard Protection:

(Briefly describe additional steps needed for overhead hazard protection such as barriers, ground fencing, scaffold fencing)

Electrical/Mechanical Safety:

(Briefly describe additional steps needed to provide electrical and/or mechanical safety.)

Emergencies:

Radio the King County or Department/Division Communications center or telephone 911.

If in the City of Seattle and the worker is suspended by fall protection equipment, ask for a Seattle Fire Department LINE RESCUE. This phrase will alert them that to dispatch the High Angle Hazard Rescue Unit.

Employee Signature _____ Date _____

Signature of supervisor or lead _____ Date _____