**Fall Protection and Ladder Safety Program/Facilities Management**

**Revised: 09-22-2003**

**Reference:  29 CFR 1926.1053**  
**29 CFR 1926.500**  
**OSHA 1926.104/1926.107/1926.450**  
**Keller’s Official OSHA Safety Handbook**

**Purpose:** To establish guidelines for use and safety procedures when working around hazardous footing, elevated heights, or other hazardous areas where the risk of falling exists.  As fall protection includes using ladders, ladder safety is also included in this program.

**Definitions:**

1.   Ladder:  Any approved device intended to vertically elevate a person for a specific purpose for a specific time.  This includes step ladders, extension ladders, and step stools.

2.   Scaffold: An approved system when assembled can vertically elevate one or more persons allowing horizontal movement for a specific purpose for an extended period of time.

3.   Tripping Hazard: Any item, incident, or combination that can create an unintended fall.  Commonly referred to as Slip, Trip, and Fall hazards.

4.   Fall Protection: An approved personal restraint device designed to prevent a fall, reduce the injury potential to persons, and minimize property damage should a fall occur.

5.   Friction: The resistance between objects such as shoes and walking surfaces.

6.   Momentum: Moving force created by the speed and size of the moving object.

7.   Gravity: The force that pulls objects back to the ground as when a fall is in progress.

8.   OSHA:  Occupational Safety and Health Administration.

9.   MBLS:  Maine Bureau of Labor Standards.

**Discussion:**

1.   Falls are one of the leading causes of death in and around a residence and many commercial industries.  According to the National Safety Council, over 6,000 people die from falls each year, and many times that number suffer severe or disabling injuries.  Causal factors range from slipping on icy surfaces, falling down stairs, falling off roofs, and falling off ladders.  More than 30,000 people are injured annually as a result of falls involving ladders.

2.   OSHA and MBLS require all personnel that use ladders in the performance of their trade to follow ladder safety and fall protection guidelines.  Regulatory authorities also stipulate that employers have a responsibility to provide adequate equipment and to ensure the work space remains free of tripping hazards.

3.   This program will address most safety issues; it is not designed to be all inclusive.   Additional and/or more technical information can be obtained from the above cited references.  All maintenance personnel will be instructed and trained in the requirements of this program.

4.   The Assistant Director of Facilities Management is responsible for ensuring that maintenance personnel are trained and will comply with this guidance.

5.   This program and these procedures will be reviewed annually against applicable federal and state guidelines for safety and revised as needed.

**Procedures:**

1. Facilities Management personnel and other employees determined to be at risk shall comply with procedures.  Contractors working on campus shall be made aware of UMF policy on ladders and fall protection. These procedures shall cover:

A. The Five Rules of Ladder Safety

B. Scaffolding and Staging

C. Mechanical Lifts

D. Slips, Trips, Falls

E. Application of Ice Melters during Inclement Winter Weather

1.A.     **The Five Rules of Ladder Safety:**

Ladders are frequently used by Facilities Management personnel to complete a myriad of work assignments.  Facilities Management ladder inventory is predominately fiberglass industrial rated step and extension ladders.  However, the campus still has some wood and aluminum ladders.  Facilities will make every effort to replace these ladders when they are taken out of service with fiberglass units.  Should a wood or aluminum ladder be used for a job, the purpose of use will be scrutinized by the servicing technician.  Under no circumstances will an electrician use an aluminum ladder to perform work.  Contractors working on campus will also follow these safety guidelines for ladder safety.  When ladders are used, the below rules shall apply:

1.A.1.  Selecting the right ladder for the job.  The two most common include  
straight ladders (single or extension) and step ladders.  Construction materials  
range from wood to aluminum to fiberglass.  While UMF Facilities Management  
will make every attempt to utilize only rated fiberglass ladders, some wood and  
aluminum ladders may be found on campus. Regardless of the type or  
construction, ensure the ladder has a label certifying that it complies with  
specifications of the American National Standards Institute (ANSI) and that it is  
UL listed.  Be sure the ladder is long enough to work comfortably and sturdy  
enough to withstand repeated use.  Never place boxes or other objects under a  
ladder to extend its height.  Do not build makeshift ladders out of chairs or other  
items.  Under no circumstances shall facilities personnel use aluminum ladders  
when work involves possible contact with electrical current sources.  **UMF**  
**electricians shall use appropriately rated fiberglass ladders only.**

1.A.2.  Inspect the ladder before you use it.  Any ladder can develop a problem  
that can render the unit unsafe.  Prior to each use, inspect it for loose or damaged  
rungs, steps, rails, or braces.  Also check for loose fasteners, hinges, or other  
hardware.  Make certain the spreaders on the stepladders can be locked in place  
and that the ladder has safety feet to provide more stability and reduce the  
likelihood of slippage.  If the ladder has any defect, it shall be taken out of  
service until repairs are made.  Often, repairs can be made when noticed.  If not,  
the ladder will be tagged and removed from service.  The Assistant Director of  
Facilities shall be notified if a ladder requires removal from service.

1.A.3.  Set up the ladder with care.  No matter how sturdy the ladder is, if it is  
placed in a dangerous location or set up improperly the hazard risk increases.   
If a ladder must be set up in a high traffic area, use barricades or cones and  
signage to prevent collisions.  Lock or block any doorways that open towards  
the ladder side.  The base of the ladder should be kept clear and set on a solid,  
level surface.  Stepladders must be fully opened with the spreaders locked.   
Straight ladders should be placed at a **FOUR-TO-ONE Ratio**.  This means the  
Base of the ladder should be one foot away from the wall or vertical surface for  
every four feet of height.  If using the ladder to access a roof, ensure the ladder  
extends a minimum of three (03) feet above the eave or edge.

1.A.4.  Climb and descend ladders cautiously.  When moving on a ladder, always  
face the ladder and use both hands for support.  Tools or equipment should be  
carried on a belt or raised and lowered with a hand line.  To reduce the risk of  
slipping, always check the bottom of shoes and ladder rungs for slippery  
substances.

1.A.5.  Use common sense when working on a ladder.  Always keep one hand on  
the ladder and never reach too far with the other.  To maintain balance, keep  
centered on the ladder.  Climbing too high can also lead to accidents, so never  
climb higher than the second step from the top on a stepladder or the third  
from the top on a straight ladder.

1.B.  **Scaffolding and Staging:**

Facilities Management has a small inventory of scaffolding for use around campus.  In addition, the need may arise for contractors to use scaffolding.  Regardless, when using scaffolding, the following procedures apply:

1.B.1.  Scaffolding erected with an unprotected edge greater than six (06) feet, will  
have a rail system or personal fall arrest system.  The only exception to this is if  
the employer can demonstrate their use creates a greater hazard than the  
prescribed safety system.

1.B.2.  Scaffolding bases will be leveled and all means of movement secured  
to prevent rolling.

1.B.3.  Prior to use, the scaffolding will be inspected to ensure all parts are free  
from structural defects and that all locking pins and safety devices are in working

order.

1.B.4.  When scaffolding operations may impede normal traffic or precludes  
egress from a building, barricades, cones, and signage will be placed to advise  
occupants of the operations.

1.B.5.  Testing and servicing of scaffolding shall conform to 29 CFR 1926.500  
through 29 CFR 1926.503.

1.C.     **Mechanical Lifts:**

Facilities Management frequently uses mechanical lifts to perform work around the campus.  These guidelines apply to both owned and rented lifts whether used by Facilities Management personnel or contractors employed on campus.

1.C.1.  Persons on mechanical lift apparatus shall wear safety harnesses.  The  
harness will be an approved five (05) point system with a safety lanyard attached  
to the lift platform.

1.C.2.  Should the work task require three (03) or more people, a ground side  
safety observer will be used.  Their only responsibility will be to watch the  
evolution for safe execution.

1.C.3.  When lifting operations may impede normal traffic or precludes  
egress from a building, barricades, cones, and signage will be placed to advise  
occupants of the operations.

1.C.4.  Prior to use, a visual safety check will be performed on the mechanical lift.   
If problems are discovered, they must be corrected prior to using the lift.  Service  
will only be performed by authorized service technicians.  If the lift is rented, the  
parent rental company will be contacted.  At no time will repairs be attempted on  
rented mechanical lifts.

1.D.     **Slips, Trips and Falls:**

Slips, trips, and falls injure more workers than any other commercial or industrial accident.  Injuries from falls may include cuts, bruises, muscle sprains and strains, broken bones, and back injuries.  They are the most common, yet avoidable workplace hazard.  In order to minimize these hazards, OSHA requires that the workplace be kept clean and orderly.  If you notice a potential tripping hazard, report this to the Facilities Management Office.  While workers and management will never eliminate this hazard, there are many simple steps that can be taken to reduce their occurrence.

1.D.1.  Be mindful of your task, location, and hazards associated with both.

1.D.2.  Practice safe walking skills.  If you must walk on wet surfaces, take  
shorter steps to keep your center of balance.  Pay attention to the surface you are  
walking on.

1.D.3.  Clean up spills immediately.  If you created the spill, clean it up.  If you  
have questions about the material, block off the area and report it to the Facilities  
Management Office.

1.D.4.  Do not let grease accumulate on shop floors, especially around machinery.

1.D.5.  Look where you are walking, never carry boxes that will block your  
vision.

1.D.6.  Keep work areas well lit and clear of clutter in work areas, walk ways, and  
stairs.

1.D.7.  Should you be a victim to a slip, trip, or fall; report the incident to your  
supervisor immediately.

1.E.      **Application of Ice Melters during Inclement Winter Weather**

The UMF Facilities Management Department recognizes the particular slip hazard that winter ice and snow accumulation brings with it, whenever the safety of pedestrian or vehicular traffic is threatened by a buildup of snow or ice, action will be taken to reduce the risk. The use of liquid deicers and or granular deicers in selected high traffic/high risk areas as a pre-event strategy and the application of granular deicers and treated sand in all areas of campus as an ongoing and post-event strategy will be incorporated, along with the physical and mechanical removal of snow and ice.

The following guidelines will be used to determine when and what will be done to reduce the potential for slips and falls during some of the most common inclement winter weather conditions:

1.E.1.  **LIGHT, POWDERY SNOW:** Ice melter may not be required, sweep or  
scrape to remove.

1.E.2.  **SLEET, FREEZING RAIN, ICE:** Apply liquid de-icer and or granular  
de-icers prior to onset of storm in selected high traffic/high risk areas. Then apply  
granular deicers and or treated sand as needed to maintain surfaces in a safe  
condition. Scrapers, shovels and appropriate grounds equipment will be used to

remove accumulated hazardous conditions as soon as practical.

1.E.3.  **WET, HEAVY SNOW:** Apply liquid de-icer and or granular de-icers  
prior to onset of storm in selected high traffic/high risk areas to maintain clear and  
hazard free surfaces as long as possible. Then apply granular deicers and or  
treated sand as needed. Removal of accumulating snow will be ongoing during  
the storm period using both manual and mechanical snow removal equipment. A  
final post storm clean up of accumulations and application of granular de-icers  
and or treated sand if needed will be performed.

1.E.4.  **LARGE ACCUMULATIONS:** Apply liquid de-icer and or granular  
de-icers prior to onset of storm in selected high traffic/high risk areas to maintain  
clear and hazard free surfaces as long as possible. Then apply granular de-icers  
and or treated sand as needed. Facilities personnel will provide ongoing snow  
removal as well as post storm removal of heavy storm accumulations. Both  
manual and mechanical means will be used for snow removal.

In addition, an ongoing assessment will be made and appropriate precautions taken to assure the safest walking and driving surfaces on campus during the winter months.