PURPOSE
The objective of this policy & guideline is to eliminate the potential for injuries and fatalities to employees and contractors resulting from falls from elevated work areas at Drew University facilities as well as compliance with OSHA regulations listed below.

REFERENCES
OSHA 1926.500 – “Fall Protection Standard”.
OSHA 1926.502 – “Fall Protection Systems Criteria and Practices”.
OSHA 1910.66 Appendix C – “Personal Fall Arrest System” (Section I – Mandatory; Sections II and III – NON-Mandatory.
OSHA 1910 Subpart D – Walking/Working Surfaces.
Exhibit 1: Fall protection Inspection Documentation Form
Exhibit 2: Roof Access Permit
Drew University Ladder Safety Program Policy and Inspection Procedure Draft 0412

RESPONSIBILITIES
It is the responsibility of department management to ensure that employees and individuals contracted to work in their assigned areas who are affected by this policy and guideline are trained and adhere to the procedure. It is the responsibility of each visitor, contractor and employee affected by this policy and guideline to adhere to this policy and guideline. The Environmental Health & Safety Department is responsible for providing technical guidance and program updates as necessary in order to assist with compliance to this policy and guideline.

DEFINITIONS
Anchorage Point – A secure point of attachment for lifelines, lanyards and/or fall arrest systems designed and certified by a Professional Engineer (P.E.) with a safety factor of 2:1 (minimum breaking strength of 5,000 pounds per worker). 29 CFR 1926.502(d)(15), ‘(15)(i) and ‘(15)(ii) allows for utilizing an anchor point of less than 5000 pounds in specific conditions. For example: if a self-retracting lifeline limits the fall arrest force to 900 pounds it could be tied into an anchor that is capable of supporting (minimum) 1800 pounds if the work is supervised in accordance with the standard.

Fall Protection System – A system for the purpose of preventing falls which uses the following equipment, including but not limited to: standard railings (guardrails), scaffolds or platforms and full body harness systems. Professional Engineers shall design fall protection systems capable of withstanding a minimum breaking strength of 5,400 lbs.

Full Body Harness – Straps which may be secured about the employee 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. The use of body belts is prohibited.
DEFINITIONS – CONT’D

Guardrails – A permanent and/or temporary barrier used to prevent employees from falling to lower levels. The barrier must be capable of withstanding an outward force of 220 lbs and be constructed of proper materials such as wood, pipe, cable etc. Non-metallic rope is prohibited. The guardrail must be 42 inches ± 3 inches in height and have a top rail, mid rail and toe boards.

Lanyard – A flexible line of wire rope, nylon webbing or synthetic rope suitable for supporting one person. One end is fastened to a full body harness and the other end is secured to a structural support or lifeline. The lanyard shall be capable of withstanding a minimum breaking strength of 5,400 lbs.

Lifeline – Can be either a wire cable or synthetic rope to which a lanyard or harness is attached in a fall protection system. The lifeline must be connected to anchorage connectors. A vertical lifeline should be provided with a weight or lifeline tensioner. The anchorage for the top connection of a vertical lifeline must have a minimum breaking strength of 5,000 lbs. Vertical lifelines are not permitted to be shared by more than one person or a person in conjunction with equipment. Horizontal lifelines (and their anchorage connectors) may be shared by more than one person as designed by a professional engineer.

Potential fall exposure situation – Situation where there is a potential fall from a height of 4 feet or more, including but not limited to unprotected floor openings, unprotected skylights, wall openings and roof edges (Note that work on ladders above 20 feet satisfies this definition). Working closer than 6 feet of any of these listed above are considered potential fall exposure situations.

Warning Line - OSHA Section 1926.501 defines a warning line as: “…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 roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area. [Emphasis added.]”

Structural Support – A building member, steel beam etc. that has a minimum breaking strength of 5400 lbs.

PROCEDURE

NON Steel Construction Activities:
Personnel exposed to a potential fall of 4 feet or more must use an appropriate control such as guardrails. Fall restraint/arrest systems may be used if personnel are continuously tied off while exposed.

Personnel who properly use approved, portable, extension or step ladders and properly constructed fixed ladders under 20 feet in height will not need additional fall protection unless transferring to another location or surface where a potential fall exposure exists.

LADDERS

See Drew University Ladder Safety Program Policy and Inspection Procedure Draft 0412
Appropriate parapets, guardrails (including scaffolding when fully assembled only) or when warning lines are installed at least 6 feet from the edge of a roof meeting the criteria set forth in OSHA 1926.502(f) would be considered protected openings where fall protection systems would not be required except in the case of aerial lifts where a full body harness is required to be worn and tied off to the platform.

1. To move from one tie-off point to another you must use a two-leg lanyard:
   a. One leg of the lanyard is connected to the origin tie-off point.
   b. The other lanyard is hooked to the destination tie-off point.
   c. Disconnect the lanyard from the origin tie-off point.

**NOTE:** You must always maintain your connection to at least one tie-off point while moving. This requirement can be met by the use of a lifeline strung between two anchorage points permitting an individual to move along that line while still remaining tied off. OSHA regulations forbid attaching two lanyard hooks to the same D-ring because interference between the hooks may cause a hook to roll out or to fail.

**ROOF WORK**

Working within 6 feet from the unprotected edge of any roof or on the outside of any railing or warning line system, requires a roof access permit to be completed by all affected employees and their department supervisor, or the Drew Facilities Contact in the case of outside contractors or an EHS representative. The permit notifies management of all employees working in these situations and ensures that employees are protected from any potential fall hazard by tying off appropriately.

**NOTE:** A roof access permit will also be required, along with appropriate fall protection if the warning lines are not present or visible (due to snow, darkness etc.) If a roof access permit is required, personnel will be required to use the buddy system. Personnel requiring a roof access permit may not work alone. All roof access points will be posted to notify those working on the roof that proper fall protection systems are required when working within 6 feet of the edge of the roof.

**FALL PROTECTION EQUIPMENT**

All fall protection equipment shall be visually inspected by the user before use for wear, damage, expiration date and deterioration and be replaced if found defective. Discard any fall protection equipment that was actually exposed to a fall or has a fall warning indicator showing. The following are minimum inspection requirements: (See Exhibit 1):

- Harness and Lanyard Condition (No fraying, tears etc.)
- Tag (Present, legible and denotes that it is a fall protection device)
- D Rings, anchor points – Not damaged, distorted etc.
- Self Retracting Lifeline (No damage).

Perform preventive maintenance on all fall protection systems such as self-retracting lifelines, etc. in accordance with the manufacturer’s recommendations. When using a 6’ shock absorbing lanyard and harness the maximum fall distance must be accounted for so that another potential injury can be avoided. The fall arrest distance would be 18 ½ feet since the lanyard is 6’, the employee is 6’ and there is a 3 ½’ deceleration distance and a 3’ margin of safety.

**STEEL CONSTRUCTION ACTIVITIES**

Employees who are on a walking/working surface with an unprotected edge more than **15 feet above a lower level** must be protected by a fall protection system.
Install perimeter safety cables at the final interior and exterior perimeters of multi-story structures as soon as the decking has been installed.

Employees working in controlled decking zones must be protected by a fall protection system when working on a surface with an unprotected edge more than 2 stories or 30 feet above a lower level and must have completed connector training (OSHA 1926.760(b)(3)).

While working at heights from 15 to 30 feet, workers must be provided with a complete fall arrest system or other allowable fall protection system and wear the equipment necessary for tying off.

**FALL OCCURS**
Immediately call 9-911 and Drew Public Safety at ext. 4444 if an employee falls. Do not attempt to pull up someone unless you have been appropriately trained.

Retire any fall protection equipment that is involved in a fall.
Exhibit 1 Fall Protection Equipment Inspection Documentation Form

<table>
<thead>
<tr>
<th>Check box if OK</th>
<th>Description of device</th>
<th>Date inspected</th>
<th>Employee name/Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Harness</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self Retracting Lifeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lanyard</td>
<td></td>
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<tr>
<td></td>
<td>(When using lanyard fall protection clearance must be accounted for)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>D-Ring Anchor Points</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>D-Ring Connectors</td>
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<td></td>
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<tr>
<td></td>
<td>Beam Anchor</td>
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<tr>
<td></td>
<td>Cross Arm Strap</td>
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<td></td>
<td>Roof Strider</td>
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<tr>
<td></td>
<td>Tag (Present, Legible and denotes it's a Fall Protection Device)</td>
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</tbody>
</table>

Perform inspection on each device used then check box, date and sign. (If there are any questions regarding wear, damage etc. please do not use the equipment without contacting your supervisor or HSE first)

Return sheet to supervisor for review. Supervisor will review and forward to EHS.
**Drew Roof Access Permit**

It has been determined by the Drew Employee or Outside Contractor and or EHS Dept that it is necessary to go to/work within 6 feet of any unprotected (protected would be a roof with an appropriate guardrail or parapet) roof edge. It is therefore necessary to fill out this permit and utilize the appropriate Fall Protection System (FPS)

<table>
<thead>
<tr>
<th>Action</th>
<th>Employee or Outside Contractor (Initial)</th>
<th>Supervisor, Drew Contact or EHS (Initial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate FPS worn by all affected employees.</td>
<td></td>
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</tr>
<tr>
<td>FPS attached to appropriate Tie Off/Anchorage Point/Lifeline</td>
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<td></td>
</tr>
<tr>
<td>Provisions are in place so that employees are continuously tied off at all times (self-retracting lifeline, two lanyards, lifeline, etc.)</td>
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</tr>
</tbody>
</table>

**Name(s) of Personnel Wearing FPS**

Print________________________ Sign________________________

Print________________________ Sign________________________

Print________________________ Sign________________________

Site: ____________________ Contractor Company__________________

Date: __________________________