

REVISIONS		
Revision Date	Section	Summary of Change
10/28/11	Entire Document	Replaced “Occupational” with “Environmental”
10/28/11	Safety	Updated information in section.

ROOF SAFETY MEASURES

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GENERAL INFORMATION:

SAFETY

1. All work shall be performed in accordance with the requirements of the Occupational Safety and Health Administration (OSHA), the University Department of Environmental Health and Safety (EHS) requirements, and other agencies regulating the safety and proper workmanship of this job. Anyone working at heights of six feet or more above another surface in construction or more than four feet in general industry needs to be protected by guardrails, safety nets, or personal fall protection systems. These regulations also apply to skylights and other roof openings. Refer to ANSI I14 and OSHA 1910.66 for applicable fall protection for window cleaning.
2. **GUARDING OF HIGH-PITCHED ROOF PERIMETERS**
 - A. A catch platform or scaffold shall be installed below the work area of roofs greater than 16 feet (4.9 meters) from the ground to eaves with a slope greater than 4 inches in 12 inches and with an unprotected side or edge. In width, the platform shall extend 2 feet beyond the protection of the eaves and shall be provided with a guardrail, mid-rail, and toe-board. This provision shall not apply where employees engaged in work upon such roofs are protected by a full body harness attached to a lifeline.
3. **GUARDING OF LOW-PITCHED ROOF PERIMETERS**
 - A. General Provisions - During the performance of roofing work on low-pitched roofs with a ground to eave height greater than 16 feet (4.9 meters), employees engaged in such work shall be protected from falling from unprotected sides and edges of the roof as follows:
 1. By the use of a warning line system erected and maintained as provided in Section 2 and supplemented for employees working between the warning line and the roof edge by the use of either an MSS (motion-stopping-safety) system, or where mechanical equipment is not being used or stored, by the use of a safety monitoring system; or
 2. By the use of a safety monitoring system on roofs fifty feet (15.25 meters) or less in width where mechanical equipment is not being used or stored.
 3. "Safety-monitoring system" - a safety system in which a competent person monitors the safety of all employees in a roofing crew, and warns them when

it appears to the monitor that they are unaware of the hazard or are acting in an unsafe manner. The competent person must be on the same roof as and within visual sighting distance of the employees, and must be close enough to verbally communicate with the employees.

4. Personal fall arrest system (i.e. proper anchor point, lanyard and body harness).

B. Warning lines

1. Warning lines shall be erected around all sides of the work area when mechanical equipment is not being used, the warning lines shall be erected not less than six feet (1.8 meters) from the roof edge.
2. The warning lines shall consist of a rope, wire, or chain, and supporting stanchions erected as follows:
 - a. The rope, wire, or chain shall be flagged at no more than six foot (1.8 meters) intervals with high-visibility material.
 - b. The rope, wire, or chain shall be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches (.86 meters) from the roof surface and its highest point is no more than 39 inches (1 meter) from the roof surface.
 - c. After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds (71 Newtons) applied horizontally against the stanchion; 30 inches (0.76 meters) above the roof surface, perpendicular to the warning line, and in the direction of the roof edge.
 - d. The rope, wire, or chain shall have a minimum tensile strength of 500 pounds (227 Kilograms), and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions as prescribed in paragraph 3.B.2.c of this section; and
 - e. The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.

4. **ACCESS PATHS SHALL BE ERECTED AS FOLLOWS:**

- A. Points of access, materials handling areas and storage areas shall be connected to

the work area by a clear access path formed by two warning lines.

- B. When the path to a point of access is not in use, a rope, wire, or chain, equal in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area.

APPROVED MANUFACTURERS: N/A

DO'S AND DON'TS: N/A

-- END OF SECTION --