4.3 Responsibilities of Director of Campus Security and Emergency Services (CSES)

Ensure that all CSES employees, and external emergency service groups (Kingston Police, OPP, RCMP) are aware of this procedure and that CSES employees are provided with adequate supervision and instruction on the hazards of working on rooftops and reinforce they do not enter the control zone unless they have the appropriate training, have a signed roof access permit, and the approved fall protection equipment.

4.4 Responsibilities of Physical Plant Construction Project Managers

Prior to any construction-related activity, or repair work on equipment or machinery on roofs where there is a fume hood discharge, ensure an appropriate work procedure, or fume hood shut down has been discussed with the contractor.

Ensure the contractor has a working at heights program that meets or exceeds this SOP.

4.5 Responsibilities of Physical Plant Managers and Supervisors

Ensure that all workers are aware of this policy.

Ensure that all workers accessing roofs have completed working at heights training.

Ensure that all workers working in or passing through the control zone are protected from fall hazards by either guard rails, or that they have been trained and are using required fall protection equipment.

Ensure that workers who use ladders to access rooftops have received Queen’s University Ladder Safety Training.

5. Definitions

Buffer zone - The area immediately outside the inner edge of the control zone and extending a further two meters in from that edge.

Control Zone – The two (2) meter border around the edge of a flat roof or platform. The use of a control zone is not permitted as a fall protection system on any sloped roof.

Flat Roof – Roof system with a slope less than or equal to 1/2 inch change in vertical elevation versus 12 inches of horizontal run).

Safe Zone – An area inside c -0.005.r-(o)1nh

If access to roof is required due to a fume hood system, or partial system, failure, PPS employees must contact their supervisor to assess the need for a full system shutdown and inspection.

7. Emergency Notification System

Emergency Notification System sirens are currently installed on the roof tops of Stauffer Library, Humphrey Hall and Chernoff Hall. Before accessing these areas, the Campus Security and Emergency Services, Emergency Report Centre (ERC ext. 36080) must be notified. Upon leaving these areas, the ERC operator must be notified.

The access points to these roof tops are equipped with contact switches which will notify the ERC operator that the door has been opened. If the ERC operator is unable to ascertain who is working or who accessed the roof, the ERC will dispatch Campus Security and Emergency Services staff to that location.

8. Access to Roof with Ladders

If a f

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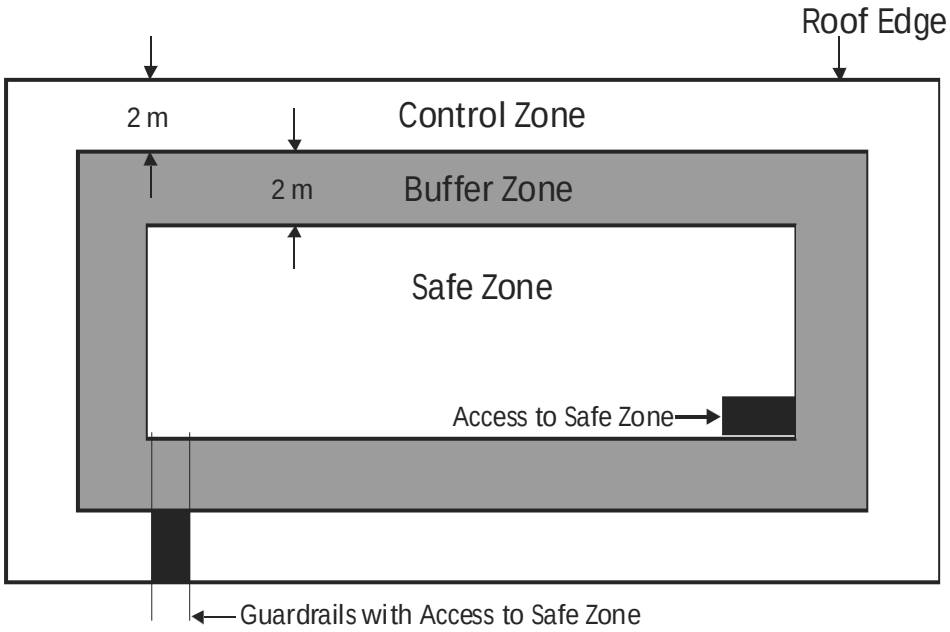

If roof top access opens into the control zone, guard rails must be installed to protect the worker until they have entered the safe zone.

When working in the control zone, fall protection equipment must be used. Fall Protection must meet CSA Z259 series of standards. (See Fall Protection SOP Safety-20).

The width of the control zone must be expanded if:

- The working slope is slippery.
- If there are windy conditions or anticipated windy conditions
- The work is carried out at an elevation relative to the unguarded edge.
- The risk is increased using equipment near the control zone.

If workers are to work within the buffer zone, either fall protection or a raised warning barrier/bump line must be used and must be put in place prior to work starting in the buffer zone.

Warning barriers/bump lines must:

- Be set up around work area at least 2 meters from unprotected edges.
- Be 1.07 m (42 inches) high.
- Be supported with weighted posts or supports adequately anchored in pla
- Be made of fiber rope with flags or sig along their entire length.

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For work of short duration, where workers may have to enter the buffer zone a safety monitoring system may be used. A Physical Plant manager/supervisor must appoint a competent person to act as a safety monitor. The safety monitor's sole duty is to monitor the safety of workers and must not have any other duties that may distract from the monitoring.

The safety monitor will:

- Warn employees when it appears that they are unaware of a fall hazard or are acting in an unsafe manner.
- Warn employees if they are approaching the control zone.
- Be located on the same walking/working surface as the employees.
- Be located close enough to other workers to communicate with them orally.

If workers will be further than the boundary of the buffer zone (in safe zone) at all times, a raised warning barrier/bumper line or fall protection is not required.

When working on rooftops workers should not

- Work with their back to the roof edge w

Appendix A

ROOF ACCESS PERMIT

Date:_____ Building:_____

Describe work to be done: _____
_____
_____
_____

Workers requiring access:

_____ _____
_____ _____
_____ _____

Safety Monitor (if used):_____

Potential Hazardous Work	Y/N	Special Safety Precautions
Work on or near fume stacks/vents		
Work on or near high voltage equipment or overhead power lines		
Work on or near an unprotected roof edge (i.e. within 2 meters from edge)		
Work in buffer zone (area that starts 2 meters from edge and 2 meters wide)		
Work where it is possible that objects or materials my fall from the roof		
Other hazards:		

I verify that all workers are aware of and understand policy *ISOP-Safety*