LOCATION	WRITTEN BY:	APPROVED BY:	DATE :	LAST REVISION:
All Schools	L. Carriere /G. Howe	G. Howe	March 12, 2013	July 7, 2017

HAZARDS PRESENT	PERSONAL PROTECTIVE EQUIPMENT (PPE)	ADDITIONAL REQUIREMENTS
• Ladder slipping to side or away from building • Falling from heights • Materials falling from above • Slipping due to wet, icy, slippery conditions • Falling through hatch of roof • Cuts or lacerations • Snow loads • High winds • Lightning • Tripping – roof piping • Skylights – falls through	• Fall protection – harness, lanyard, lifeline, rope grab or retractable lanyard • Hard hat – where required • Gloves (where required) • Proper footwear (no opened toed shoes, no sandals) • Radio – cell phone • Edge of flat roofs marked to 2m • Safety line.	• Fall protection training • Ladder training • Back to Basics, Lifting Training • Use proper posture and body position appropriate for the task. • SWP for ladder use.

SAFE WORK PROCEDURE

PROCEDURE:

1. The reason for entering onto the roof is to conduct regular maintenance checks such as cleaning roof drains, repair and maintenance on air handling units and exhaust fans: changing filters, belts, lubricating etc.

2. Notify the front office that you are entering onto the roof (give specific location and approximate time frame). You must call in every 15-30 minutes to let them know you are OK.

3. For any roof top equipment that:
   a) is located within two meters of a roof edge OR,
   b) has not had guard rails installed OR,
   c) requires work on any pitched roof without a catwalk system, fall protection <u>is required</u> to be worn and the worker must be tied off while working. If you are NOT working within 2M of an open edge on a flat roof you are not required to wear fall protection.

4. Ensure your cell phone has been moved to an upper pocket location so that it is easily accessible. DO NOT leave your cell phone in your pants pocket if wearing a harness. Remove all items from your pockets – you pockets must be empty before donning your harness.

5. At the base of the ladder, don all appropriate personal protective equipment (PPE). This may include: harness, shock absorbing lanyard, lifeline and anchor or retractable lanyard and anchor.

6. Climb the vertical fixed ladder and unlock the roof hatch. OR set up an extension ladder outside the building to access roof. Follow the SWP for ladder use. Remember your ladder must be tied off.

7. Use appropriate hoisting equipment (place equipment/material into a bag/pail or box – attach a rope to it) to raise any tools and materials required for work onto the roof.

8. Climb the ladder and exit through the roof hatch guardrail onto the roof. Close the guardrail gate. Use the end of the hoisting rope and pull up all tools and materials needed.

9. Once on top of the roof: stay in the safe zone – 2M from any open edge and conduct your hazard assessment prior to starting work. Remove hazards where possible and determine corrective measures for those hazards that cannot be removed.

10. In work areas located two meters or greater from an open edge (where fall protection equipment is not required) – be aware of your surroundings and never turn your back to an open edge.

11. For schools who must working within 2M of an open edge: look for your specific 5000lb anchor point and connect a cable or web anchor to the anchor. Attach your lifeline, rope-grab and your shock absorbing lanyard.

12. Flat roof work requires a travel restraint system (does not allow the user to reach an open edge). Pitched roof requires a fall arrest system (arrests a fall in progress). The exception for a pitched roof is if a catwalk and platform have been installed around the equipment. In this case workers do not need to be tied off.

13. Stay on the flat surface of the roof to do required maintenance where this is feasible.

14. When work is completed, disconnect the anchor, lifeline and lanyard. Exit the roof through the hatch or by ladder. Ensure your footwear is not slippery.

15. Lock roof hatch or take down extension ladder and put it away.

16. Report back to the person you notified in step 1 and let them know that you have finished.

RESCUE:

- Quickly assess the situation and have another worker or person call 911 and explain the situation to the emergency responder. Provide the following information:
  - Location
  - Worker involved
  - Height of the suspended worker
  - A call back number in case it is required
- Provide continuous monitoring of the suspended worker and look for signs and symptoms of orthostatic intolerance and suspension trauma. The possible signs and symptoms of orthostatic intolerance include:
  - faintness, paleness
  - nausea
  - breathlessness
  - dizziness
  - unusually low heart rate or blood pressure
  - sweating
  - hot flashes
  - "graying"
  - loss of vision or increased heart rate.

- If rescue can't be performed in a prompt manner, and self-rescue isn't an option, have the suspended worker keep their legs moving to "keep the blood pumping," reducing the risk of venous pooling.

- If the workers carries foot loops, they can unravel them quickly (attached to each side of their harness) and then step into them. This relieves harness pressure on the legs and transfers it to the hips.

RESCUE OPTIONS:

Self-Rescue:
If the person working at heights makes proper choices in the equipment to be used and uses that equipment properly, the fallen worker may perform a self-rescue which will include:

1. A climb back up to the level from which he fell (a few inches to two or three feet)
2. Return to the floor or ground and take all components of the fall protection system out of service
3. Report the incident to their supervisor and obtain medical treatment as may be required
4. Bag and tag those components with the name, date and activity at the time of the fall and complete an incident report.
5. Return the used components in the bag to the S&H officer for inspection.

Mechanical Aided Aerial Lift:

1. Call 911
2. The worker accesses the aerial lift and ensures that there is a second adjustable lanyard or a 3 foot lanyard available for the rescued worker
3. The aerial lift is maneuvered into position and raised up under the worker to be rescued
4. Attach the second lanyard in the aerial lift to the worker being rescued
5. Disconnect the rescued worker from the impacted fall arrest equipment
6. Lower the worker to the ground
7. Take care of the rescued worker medically or as needed. Report the incident to your supervisor.
8. Bag and tag those components with the name, date and activity at the time of the fall and complete an incident report.
9. Return the used components in the bag to the S&H Officer for inspection.

Extension Ladders:

1. Call 911
2. Obtain an extension ladder or step ladder of sufficient height and place the ladder under the fallen worker. Ensure that the ladder extends sufficiently above the height of the fallen worker.
3. The fallen worker will then climb onto the ladder to support himself.
4. An assessment of the fallen worker will then be made to determine if he should attempt to climb down the ladder or wait for assistance.
5. If the worker can climb down the ladder, then have the worker release the rope grab and climb down the ladder.
6. If the worker cannot climb down the ladder have him wait until another means of assistance is available (man lift, 911).

7. Take care of the rescued worker medically as needed.
8. Bag and tag those components with the name, date and activity at the time of the fall and complete an incident report. Report the incident to your supervisor
9. Return the used components in the bag to the S&H Officer for inspection.

Post Rescue:
Do not move the rescued worker to a horizontal position too quickly. This may result in a large volume of de-oxygenated blood to move to the heart, if the worker has been suspended for an extended period. This can also lead to cardiac arrest.

Notify your supervisor and the S&H Officer that you've had a fall. Do not touch or move any of the equipment unless authorized to do so by the S&H Officer.

Orthostatic Intolerance:
Standing upright results in a series of reflexive bodily responses, regulated by the Autonomic Nervous System, to compensate for the effect of gravity upon the distribution of blood. These conditions are a result of an inappropriate response to this change in body position.

The normal response for a change in body position, results in stabilization to the upright position in approximately sixty seconds. During this process, the normal change in heart rate would include an increase in heart rate of 10 to 15 beats per minute.

For those who are affected with Orthostatic Intolerance, there is an excessive increase in heart rate upon standing, resulting in the cardiovascular system working harder to maintain blood pressure and blood flow to the brain.

REGULATORY REQUIREMENTS

- Manitoba Workplace Safety and Health Regulations M.R. 217/2006
  - Part 2 Subsection 2.1 (a – c) Safe Work Procedures
  - Part 5 - First Aid
  - Part 6 – Personal Protective Equipment
  - Part 8 – Musculoskeletal Injuries.
  - Part 14 – Fall Protection
- Fall Protection Guideline