

Policy

Policy Title: Fall Protection	Document No: 10198
Department: Safety	Revision No. 03
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1.0 Purpose

To outline policies and guidelines associated with fall protection.

2.0 Scope

1.1. This policy applies to all departments within the Conviron business.

3.0 References

1.2. Manitoba Workplace Health and Safety Regulations – Regulation, Part 14

1.3. OSHA Standard 1926.760

1.4. Manitoba Guideline for Fall Protection

1.5. Procedure 10110 – Supervisor Incident Reporting.

4.0 Definitions

none

5.0 Policy

5.1 FALL PROTECTION IMPLEMENTATION

- 5.1.1 The fall protection plan shall be implemented under the supervision of a competent person.
- 5.1.2 The fall protection plan will meet the requirements of this policy.
- 5.1.3 Where a client's fall protection requirements are more stringent than those in this policy or legislative requirements, workers will adopt those requirements.

5.2 FALL PROTECTION SYSTEMS

- 5.2.1 Types: Guardrail System - Protective Cover System - Travel Restraint System - Fall Restrictive System - Fall Arrest System
- 5.2.2 Requirements: Use a fall protection system if a worker is exposed to any of the following hazards:
 - Falling more than 2.25 metres. (7.5 feet)
 - Falling more than 1.2 metres (4 feet), if the work area is not free of tools, materials and/or equipment
 - Falling into operating machinery.
 - Falling into water or another liquid.
 - Falling into or onto a hazardous substance or object.
 - Falling through an opening on a work surface.
- 5.2.3 A guardrail system is to be used for fall protection whenever practical.
- 5.2.4 If it is not possible to install a guardrail system as previously defined, a worker shall be adequately protected by a travel restraint system, a fall restricting system, fall arrest system. Safety nets are not permitted.
 - 5.2.4.1 A Guardrail System shall be used if a worker has access to the perimeter of an open side of any of the following work surfaces and is exposed to a fall of 2.4 meters (8 feet) or more:
 - A floor, including the floor of a mezzanine or balcony.
 - The surface of a bridge.
 - A roof while formwork is in place.
 - A scaffold platform or other work platform, runway or ramp.
 - 5.2.4.2 A guardrail system shall consist of a top rail, intermediate rail and toe board. A guardrail system may have the intermediate guardrail replaced by a material that can withstand a point load of 450 Newtons, (101 lbs force), applied in a lateral or vertical downward direction. If the guardrail system is located at the perimeter of a work surface, the distance between the edge of the surface and the guardrail system shall not be greater than 300 millimeters (1 ft) and shall have a height of 42-45 inches from top rail to the working surface. A guardrail system may be removed temporarily to

perform work in or around the opening if a worker is adequately protected and signs are posted.

5.2.4.3 A Guardrail System shall be capable of resisting anywhere along the length of the system the following point loads when applied separately, without exceeding the allowable unit stress for each material used:

- 675 Newtons applied in a lateral direction to the top rail.
- 450 Newtons applied in a vertical downward direction to the top rail.
- 450 Newtons applied in a lateral or vertical downward direction to the intermediate rail, or midway between the top rail & the toe board.
- 225 Newtons applied in a lateral direction to the toe board.
- If the distance between any two adjacent posts of the guardrail system is greater than 2.4 metres (8 feet), the system shall be capable of resisting the required loads specified.
- The wood shall be free of sharp objects such as splinters and protruding nails.

5.2.5 A Protective Cover shall be used to prevent a worker from falling through an opening on a work surface. Completely shield the opening with a cover that is securely fastened and identified as a hole cover. The cover shall be made from a material that is adequate to support all loads to which the cover may be subjected. The cover must be capable of supporting a live load of at least 2.4 Kilopascals (50 psf) without exceeding the allowable unit stresses for the material used. A protective covering may be removed temporarily to perform work in or around the opening if a worker is adequately protected and signs are posted.

5.2.6 The Travel Restraint System shall consist of a full body harness with adequate attachment points or a safety belt. The full body harness or safety belt shall be attached by a lifeline and/or lanyard to a fixed anchor point. A competent worker shall inspect the system before each use. All defective components shall be removed and tagged as "out of service". This system does not allow for a fall of any nature and, second to a guardrail system, should be considered as the next most ideal method of protection.

5.2.7 The Fall Restrictive System (positioning device system) shall consist of an assembly of components that is designed and arranged in accordance with the manufacturer's instructions so that a worker's free fall distance does not exceed 0.6 metres (2 feet) and is attached to an independent fixed support. A competent worker before each use shall inspect the system. All defective components shall be removed and tagged as "out of service". Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

5.2.8 The Fall Arrest System shall consist of a full body harness with adequate attachment points and a lanyard equipped with a shock absorber or similar device. The system shall be attached by a lifeline or by the lanyard to an independent fixed support / anchor point at a level no lower than the worker's waist whenever possible. The system shall be arranged so that a worker cannot hit the ground or an object on a level below the work and has enough strength to withstand twice the potential impact energy of a free fall of 6 feet or the equipment manufacturers fall limit, whichever is less. A shock absorber shall not be used if it allows the worker to

hit the ground or an object or a level below the work. The system shall not expose a worker who falls to a peak fall arrest force greater than 8 kilonewtons (1,800 lb force), a free fall of more than 6 feet or a deceleration distance of more than 3.5 feet.

- 5.2.9 Before each use, a competent worker shall inspect the system. All defective components shall be removed and tagged as “out of service”.
- 5.2.10 All the above systems shall be designed by a professional engineer in accordance with good manufacturing practices and shall meet the National Standards of Canada, as well as ANSI standards with corresponding equipment labeling from the manufacturer. The equipment shall be used according to manufacturer’s recommendations.
- 5.2.11 A Fixed Support is a permanent anchor system that is installed according to the Building Code. It must be capable of supporting a static force of at least 22.25 kilonewtons (5,000 lb force) without exceeding the allowable unit stress for each material used.
- 5.2.12 A temporary fixed support used in a fall restricting system must be capable of supporting a static force of at least 22.25 kilonewtons (5,000 lb force) without exceeding the allowable unit stress for each material used.
- 5.2.13 Controlled Access Zones using barricades and Safety Monitoring Systems shall be used to prevent anyone from entering the area. Barricades should also be used to prevent any objects from falling.
- 5.2.14 A Professional Engineer shall design all Horizontal Lifelines. A Professional Engineer or a competent worker designated by the supervisor shall inspect the lifeline before each use. The drawings for the lifeline shall be kept on the site as long as the system is in use.
- 5.2.15 The Vertical Lifeline must be made of synthetic rope type and have a diameter of at least 16mm (5/8”). All lifelines must be CSA approved. A knot shall not be used to secure a lifeline to an anchor. A knot may be used to ensure a rope grab does not slide off the vertical lifeline. If during your inspection you find cuts, loose fibres, water damage or damage at the thimbles, the lifeline shall be removed and tagged as “out of service”.
- 5.2.16 In the event of a fall-related incident, a prompt rescue of the employee should take place. The incident should be reported and investigated according to procedure 10110 – Supervisor Incident Reporting.

5.3 FALL PROTECTION PLAN

- 5.3.1 A fall arrest rescue plan must be developed before workers may use a fall arrest system at a work site. The plan must be suitable to the environment and created by a qualified person.

5.4 TRAINING

- 4.4.1 Workers who will be using a fall protection system will be trained in its use, care and inspection by a competent person.
- 4.42 All workers who may use a fall protection system shall be adequately trained (and retrained as necessary) in its use and given adequate oral & written instructions by a competent person. A written copy of the training & instruction record for fall protection shall be kept on site and a copy forwarded to senior management. Before any use of a fall arrest system or a safety net by a worker at a project, the worker's supervisor shall develop written procedures for rescuing the worker after his or her fall has been arrested.

6.0 Revision History

Revision Number	Notes
0	New Procedure
01	5.1.19 – Added a statement regarding retraining. 5.1.20 – Added a statement regarding performing a prompt rescue and incident investigation for a fall-related incident. 5.1.21 – Added a statement that the site specific safety plan should be completed when requested by a qualified person.
02	3.3 – Added information to the reference section. 3.1, 3.2, 3.3 6. – Added a section called training with a description. Added policies to conform to ISN/OSHA requirements. 5.1.2 Changed fall limit to 8 feet. 5.1.4 Added height requirement for guardrail 5.1.7 Added safety nets are not permitted 5.1.9 Added 3000 lb requirement 5.1.10 Added anchor point height requirement, impact energy requirement, added free fall and deceleration requirements 5.1.12 Added ANSI requirements 5.1.13, 5.1.14 Added 5000 lb requirement Added 5.1.15 Controlled access zones 5.1.22 Added job site specific and maintenance requirements. 5.1 Added Fall protection implementation 5.1.16/17 Removed sections

03	Restructured document 5.1.3 Added site requirements to be met if more stringent 5.31. Added rescue plan required for each job site.
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7.0 Attachments

N/A