

Occupational Health and Safety Act
ONTARIO REGULATION 213/91

CONSTRUCTION PROJECTS

26. Sections 26.1 to 26.9 apply where a worker is exposed to any of the following hazards:

1. Falling more than 3 metres.
2. Falling more than 1.2 metres, if the work area is used as a path for a wheelbarrow or similar equipment.
3. Falling into operating machinery.
4. Falling into water or another liquid.
5. Falling into or onto a hazardous substance or object.
6. Falling through an opening on a work surface. O. Reg. 145/00, s. 12; O. Reg. 85/04, s. 4.

26.1 (1) A worker shall be adequately protected by a guardrail system that meets the requirements of subsections 26.3 (2) to (8). O. Reg. 145/00, s. 12.

(2) Despite subsection (1), if it is not reasonably possible to install a guardrail system as that subsection requires, a worker shall be adequately protected by at least one of the following methods of **fall protection**:

1. A travel restraint system that meets the requirements of section 26.4.
2. A fall restricting system that meets the requirements of section 26.5.
3. A fall arrest system, other than a fall restricting system designed for use in wood pole climbing, that meets the requirements of section 26.6.
4. A safety net that meets the requirements of section 26.8. O. Reg. 145/00, s. 12; O. Reg. 85/04, s. 5 (1).

(3) The components of any system listed in subsection (2) shall be designed by a professional engineer in accordance with good engineering practice, and shall meet the requirements of any of the following National Standards of Canada standards that are applicable:

1. CAN/CSA-Z259.1-05: Body Belts and Saddles for Work Positioning and Travel Restraint.
2. CAN/CSA-Z259.2.1-98 (R2008): Fall Arresters, Vertical Lifelines and Rails.
3. CAN/CSA-Z259.2.2-98 (R2004): Self-Retracting Devices for Personal Fall-Arrest Systems.
4. CAN/CSA-Z259.2.3-99 (R2004): Descent Control Devices.
5. CAN/CSA-Z259.10-06: Full Body Harnesses.
6. CAN/CSA-Z259.11-05: Energy Absorbers and Lanyards.
7. CAN/CSA-Z259.12-01 (R2006): Connecting Components for Personal Fall Arrest Systems (PFAS).
8. CAN/CSA-Z259.14-01 (R2007): Fall Restrict Equipment for Wood Pole Climbing. O. Reg. 85/04, s. 5 (2); O. Reg. 443/09, s. 1.

(4) Before any use of a fall arrest system or a safety net by a worker at a project, the worker's employer shall develop written procedures for rescuing the worker after his or her fall has been arrested. O. Reg. 145/00, s. 12.

26.2 (1) An employer shall ensure that a worker who may use a **fall protection** system is adequately trained in its use and given adequate oral and written instructions by a competent person. O. Reg. 145/00, s. 13.

Note: On April 1, 2015, section 26.2 is amended by adding the following subsection: (See: O. Reg. 252/14, ss. 1, 2)

(1.1) In addition to the requirements of subsection (1), an employer shall ensure that a worker who may use a **fall protection** system meets the working at heights training requirements of Ontario Regulation 297/13 (Occupational Health and Safety Awareness and Training). O. Reg. 252/14, s. 1.

(2) The employer shall ensure that the person who provides the training and instruction referred to in subsection (1) prepares a written training and instruction record for each worker and signs the record. O. Reg. 145/00, s. 13.

(3) The training and instruction record shall include the worker's name and the dates on which training and instruction took place. O. Reg. 145/00, s. 13.

(4) The employer shall make the training and instruction record for each worker available to an inspector on request. O. Reg. 145/00, s. 13.

26.3 (1) Despite paragraph 1 of section 26, a guardrail system that meets the requirements of this section shall be used if a worker has access to the perimeter or an open side of any of the following work surfaces and is exposed to a fall of 2.4 metres or more:

1. A floor, including the floor of a mezzanine or balcony.
2. The surface of a bridge.
3. A roof while formwork is in place.
4. A scaffold platform or other work platform, runway or ramp. O. Reg. 145/00, s. 14.

(2) One of the following precautions shall be used to prevent a worker from falling through an opening on a work surface:

1. A guardrail system that meets the requirements of this section.
2. A protective covering that,
 - i. completely covers the opening,
 - ii. is securely fastened,
 - iii. is adequately identified as covering an opening,
 - iv. is made from material adequate to support all loads to which the covering may be subjected, and
 - v. is capable of supporting a live load of at least 2.4 kilonewtons per square metre without exceeding the allowable unit stresses for the material used. O. Reg. 145/00, s. 14.

(3) The guardrail system or protective covering required under subsection (1) or (2) may be removed temporarily to perform work in or around the opening if a worker is adequately protected and signs are posted in accordance with subsections 44 (1) and (2). O. Reg. 145/00, s. 14.

(4) The following are the specifications for a guardrail system:

1. It shall have a top rail, an intermediate rail and a toe board.
2. The intermediate rail may be replaced by material that can withstand a point load of 450 newtons applied in a lateral or vertical downward direction.

3. Subject to subsection 116 (8), the top of the guardrail system shall be located at least 0.9 metres but not more than 1.1 metres above the surface on which the system is installed.
4. The intermediate rail shall be located midway between the top rail and the toe board.
 - 4.1 The toe board shall extend from the surface to which the guardrail system is attached to a height of at least 89 millimetres.
5. 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 millimetres. O. Reg. 145/00, s. 14; O. Reg. 443/09, s. 2 (1).
 - (5) A guardrail system shall be capable of resisting anywhere along the length of the system the following loads when applied separately, without exceeding the allowable unit stress for each material used:
 1. A point load of 675 newtons applied in a lateral direction to the top rail.
 2. A point load of 450 newtons applied in a vertical downward direction to the top rail.
 3. A point load of 450 newtons applied in a lateral or vertical downward direction to the intermediate rail, or midway between the top rail and the toe board.
 4. A point load of 225 newtons applied in a lateral direction to the toe board. O. Reg. 145/00, s. 14.
 - (6) The distance between any two adjacent posts of the guardrail system may be greater than 2.4 metres only if the system is capable of resisting the loads specified in subsection (5) increased in proportion to the greater distance between the posts. O. Reg. 443/09, s. 2 (2).
 - (7) The following additional requirements apply to a guardrail system that is made of wood:
 1. The wood shall be spruce, pine or fir (S-P-F) timber of construction grade quality or better and shall not have any visible defect affecting its load-carrying capacity.
 2. The wood shall be free of sharp objects such as splinters and protruding nails.
 3. The system shall have posts that are at least 38 millimetres by 89 millimetres, are securely fastened to the surface and are spaced at intervals of not more than 2.4 metres.
 4. The top rail and the intermediate rail shall each be at least 38 millimetres by 89 millimetres. O. Reg. 145/00, s. 14; O. Reg. 443/09, s. 2 (3).
 - (7.1) If a guardrail system that is made of wood is constructed and installed so that it is capable of resisting all loads that it may be subjected to by a worker, the following do not apply:
 1. The requirement in paragraph 2 of subsection (4) that the replacement material can withstand a point load of 450 newtons.
 2. Subsections (5) and (6). O. Reg. 443/09, s. 2 (4).
 - (8) The following additional requirements apply to a guardrail system that is made of wire rope:
 1. The top rail and intermediate rail shall be made of wire rope that is at least 10 millimetres in diameter, and the rope shall be kept taut by a turnbuckle or other device.
 2. The outward deflection of the top rail and intermediate rail resulting from the loads specified in subsection (5) shall not extend beyond the edge of a work surface.
 3. The system shall have vertical separators at intervals of not more than 2.4 metres and horizontal supports at intervals of not more than 9 metres.

4. Revoked: O. Reg. 443/09, s. 2 (6).

O. Reg. 145/00, s. 14; O. Reg. 443/09, s. 2 (5, 6).

26.4 (1) A travel restraint system shall consist of a full body harness with adequate attachment points or a safety belt. O. Reg. 145/00, s. 14.

(2) The full body harness or safety belt shall be attached by a lifeline or lanyard to a fixed support that meets the requirements of section 26.7. O. Reg. 145/00, s. 14.

(3) The travel restraint system shall be inspected by a competent worker before each use. O. Reg. 145/00, s. 14.

(4) If a component of the travel restraint system is found to be defective on inspection, the defective component shall immediately be taken out of service. O. Reg. 145/00, s. 14.

26.5 (1) A fall restricting system that is not designed for use in wood pole climbing shall consist of an assembly of components that is,

(a) attached to an independent fixed support that meets the requirements of section 26.7; and

(b) designed and arranged in accordance with the manufacturer's instructions and so that a worker's free fall distance does not exceed 0.6 metres. O. Reg. 85/04, s. 6.

(2) A fall restricting system that is designed for use in wood pole climbing,

(a) shall consist of an assembly of components that is designed and arranged in accordance with the manufacturer's instructions; and

(b) shall not allow pole slippage in excess of the distances set out in the applicable National Standards of Canada standard referred to in subsection 26.1 (3). O. Reg. 85/04, s. 6.

(3) A fall restricting system shall be inspected by a competent worker before each use. O. Reg. 85/04, s. 6.

(4) If a component of the fall restricting system is found to be defective on inspection, the component shall be taken out of service immediately. O. Reg. 85/04, s. 6.

(5) If a worker who is using the fall restricting system falls or slips more than the distance determined under clause (1) (b) or (2) (b), as the case may be, the system shall be taken out of service immediately and shall not be used again by a worker unless all components of the system have been certified by the manufacturer as being safe for reuse. O. Reg. 85/04, s. 6.

26.6 (1) A 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. O. Reg. 145/00, s. 14.

(2) The fall arrest system shall be attached by a lifeline or by the lanyard to an independent fixed support that meets the requirements of section 26.7. O. Reg. 145/00, s. 14.

(3) The fall arrest system shall be arranged so that a worker cannot hit the ground or an object or level below the work. O. Reg. 145/00, s. 14.

(4) Despite subsection (1), the fall arrest system shall not include a shock absorber if wearing or using one could cause a worker to hit the ground or an object or level below the work. O. Reg. 145/00, s. 14.

(5) The fall arrest system shall not subject a worker who falls to a peak fall arrest force greater than 8 kilonewtons. O. Reg. 145/00, s. 14.

(6) The fall arrest system shall be inspected by a competent worker before each use. O. Reg. 145/00, s. 14.

(7) If a component of the fall arrest system is found to be defective on inspection, the defective component shall immediately be taken out of service. O. Reg. 145/00, s. 14.

(8) If a worker who is using the fall arrest system falls, the system shall be immediately removed from service and shall not be used again by a worker unless all components of the system have been certified by the manufacturer as being safe for re-use. O. Reg. 145/00, s. 14.

(9) Subsections (1) to (8) do not apply to fall restricting systems designed for use in wood pole climbing. O. Reg. 85/04, s. 7.

26.7 (1) A permanent anchor system shall be used as the fixed support in a fall arrest system, fall restricting system or travel restraint system if the following conditions are met:

1. The anchor system has been installed according to the *Building Code*.

2. It is safe and practical to use the anchor system as the fixed support. O. Reg. 145/00, s. 14.

(2) If the conditions set out in subsection (1) are not met, a temporary fixed support shall be used that meets the following requirements:

1. Subject to paragraph 2, a support used in a fall arrest system shall be capable of supporting a static force of at least 8 kilonewtons without exceeding the allowable unit stress for each material used.

2. If a shock absorber is also used in the fall arrest system, the support shall be capable of supporting a static force of at least 6 kilonewtons without exceeding the allowable unit stress for each material used.

3. Subject to paragraph 4, a support used in a fall restricting system must be capable of supporting a static force of at least 6 kilonewtons without exceeding the allowable unit stress for each material used.

4. Paragraph 3 does not apply to a support that is used in accordance with the manufacturer's written instructions and is adequate to protect a worker.

5. A support used in a travel restraint system shall be capable of supporting a static force of at least 2 kilonewtons without exceeding the allowable unit stress for each material used. O. Reg. 145/00, s. 14.

(3) Despite the requirements listed in subsection (2), the support capacity of a temporary fixed support used in a **fall protection** system may be determined by dynamic testing in accordance with good engineering practice to ensure that the temporary fixed support has adequate capacity to arrest a worker's fall. O. Reg. 145/00, s. 14.

(4) A fixed support shall not have any sharp edges that could cut, chafe or abrade the connection between it and another component of the system. O. Reg. 145/00, s. 14.

(5) Subsections (1) to (4) do not apply to fall restricting systems designed for use in wood pole climbing. O. Reg. 85/04, s. 8.

26.8 (1) A safety net shall be designed, tested and installed in accordance with ANSI Standard 10.11-1989, Personnel and Debris Nets for Construction and Demolition Operations. O. Reg. 145/00, s. 14.

(2) The safety net shall be installed by a competent worker. O. Reg. 145/00, s. 14.

(3) A professional engineer or a competent person under the engineer's supervision shall inspect and test the installation of the safety net before it is put in service. O. Reg. 145/00, s. 14.

(4) The engineer shall document the inspection and testing of the safety net. O. Reg. 145/00, s. 14; O. Reg. 85/04, s. 9.

(5) A copy of the document shall be kept at the project while the safety net is in service. O. Reg. 145/00, s. 14.

26.9 (1) This section applies to a lanyard or lifeline that is part of a travel restraint system or a fall arrest system. O. Reg. 145/00, s. 14.

(2) The following requirements apply to a lanyard or a lifeline:

1. It shall not be used in such a way that it is likely to be cut, chafed or abraded.
2. It shall not be subjected to extreme temperature, flame, abrasive or corrosive materials or other hazards that may damage it.
3. The free end of the lanyard or lifeline shall be kept clear of equipment and machinery. O. Reg. 145/00, s. 14.

(3) Only one person at a time may use a lanyard. O. Reg. 145/00, s. 14.

(4) The connecting ends of a lanyard shall be wrapped around a protective thimble and securely fastened with a swaged fitting or eye splice supplied by the manufacturer of the lanyard. O. Reg. 145/00, s. 14.

(5) A horizontal or vertical lifeline shall be kept free from splices or knots, except knots used to connect it to a fixed support. O. Reg. 145/00, s. 14.

(6) Only one person at a time may use a vertical lifeline. O. Reg. 145/00, s. 14.

(7) A vertical lifeline shall,

(a) extend to the ground; or

(b) have a positive stop that prevents the rope grab or other similar device from running off the end of the lifeline. O. Reg. 145/00, s. 14.

(8) The following requirements apply to a horizontal lifeline system:

1. It shall be designed by a professional engineer in accordance with good engineering practice.
2. The design may be a standard design or a custom design.
3. The design shall,
 - i. show the arrangement of the system including the anchorage or fixed support system,
 - ii. indicate the components used,
 - iii. state the number of workers that can safely be attached to it,
 - iv. set out instructions for installation or erection, and
 - v. show the design loads for the system.
4. The system shall be installed or erected, and maintained, in accordance with the professional engineer's design.
5. Before each use, the system shall be inspected by a professional engineer or a competent worker designated by a supervisor.
6. The constructor shall keep the design at the project while the system is in use. O. Reg. 145/00, s. 14.