

**Analysis Document  
Fall Protection – 7-20-16**

Current Part C-1	Proposal	OSHA	Comments
<p>WAC 296-155-24601, Scope and application  <b>WAC 296-155-24603, Definitions</b>            WAC 296-155-24605, General requirements            WAC 296-155-24607, Fall protection required regardless of height  <b>WAC 296-155-24609, Fall protection required at 4 feet or more</b>  <b>WAC 296-155-24611, Fall protection required at 10 feet or more</b>  <b>WAC 296-155-24613, Fall arrest specifications</b>  <b>WAC 296-155-24615, Fall restraint specifications</b>            WAC 296-155-24617, Positioning device system specifications            WAC 296-155-24619, Other specifications            WAC 296-155-24621, Training            WAC 296-155-24623, Appendix A: Determining roof widths- Non-mandatory guidelines for complying with WAC 296-155-24615(5).            WAC 296-155-24624, Appendix B: Calculating fall clearance distance using a shock-absorbing lanyard and d-ring anchorage connector – Non-mandatory guidelines for complying with WAC 296-155-24613(1)(r).</p>			
<p><b>WAC 296-155-24603, Definitions</b>  <b>Walking/working surface.</b> Any area including, but not limited to, floors, a roof surface, bridge, the ground, and any other surfaces whose dimensions are 45 inches or more in all directions, through which workers can pass or conduct work. A walking/working surface does not include vehicles or rolling stock on which employees must be located in order to perform their job duties.</p>		<p><b>1926.500(b)</b>  <b>Walking/working surface</b> means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.</p>	<p>The issue here is that OSHA wants clarification on the DOSH definition of WWS and the 45” in each direction size requirement. This also plays in to the trigger height issue outlined in the previous section.</p>

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<p><b>WAC 296-155-24609, Fall protection required at 4 feet or more.</b>            (4) Guarding of floor openings.            (d) Wherever there is a danger of falling through an unprotected skylight opening, or the skylight has been installed and is not capable of sustaining the weight of a two hundred pound person with a safety factor of four, standard guardrails shall be provided on all exposed sides in accordance with WAC 296-155-24615(2) or the skylight shall be covered in accordance with WAC 296-155-24615(3). Personal fall arrest equipment may be used as an equivalent means of fall protection when worn by all employees exposed to the fall hazard.</p>		<p><b>1926.501</b>            (4) Holes.</p> <p>(i) Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes.</p> <p>(ii) Each employee on a walking/working surface shall be protected from tripping in or stepping into or through holes (including skylights) by covers.</p> <p>(iii) Each employee on a walking/working surface shall be protected from objects falling through holes (including skylights) by covers.</p>	<p>The issue here is that OSHA feels the statement “Whenever there is danger of falling through an unprotected skylight opening” is too subjective, makes the code difficult to enforce and puts the burden of proof on the CSHO to prove that there is a hazard.</p>
<p><b>WAC 296-155-24609, Fall protection required at 4 feet or more.</b>            (5) Guarding of wall openings.            (a) You must guard wall openings, from which there is a fall hazard of 4 feet or more, and the bottom of the opening is less than 39 inches above the working surface, as follows:             (i) When the height and placement of the opening in relation to the working surface is such that</p>		<p><b>1926.501(b)(14)</b>            (14)Wall openings. Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 m) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 m) above the walking/working surface, shall be</p>	<p>The issue here is that OSHA feels the statement “When the height and placement of the opening in relation to the working surface is such that either a standard rail or intermediate rail will effectively reduce the danger of falling, one or both shall be provided” is too subjective, makes the code difficult to enforce and puts the burden of proof on the CSHO to prove that there is a hazard.</p>

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<p>either a standard rail or intermediate rail will effectively reduce the danger of falling, one or both shall be provided;</p>		<p>protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.</p>	
<p><b>WAC 296-155-24611, Fall protection required at 10 feet or more.</b>            (1) You must ensure that the appropriate fall protection system is provided, installed, and implemented according to the requirements in this part when employees are exposed to fall hazards of 10 feet or more to the ground or lower level, while:            (a) Engaged in roofing work on a low-pitched roof;            (b) Constructing a leading edge;  <i>Note: Employees not directly involved with constructing the leading edge, or are not performing roofing work must comply with WAC 296-155-24609, Fall protection required at 4 feet or more.</i>            (c) Working on any surface that does not meet the definition of a walking/working surface not already covered in WAC 296-155-24609;            (d) Engaged in excavation and trenching operations.</p>		<p><b>1926.501</b>             (b)(1) Unprotected sides and edges. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.</p>	
<p><b>WAC 296-155-24611, Fall protection required at 10 feet or more.</b>            (i) Exceptions. Fall protection is not required at excavations when employees are:            (A) Directly involved with the excavation process and on the ground at the top edge of the excavation; or            (B) Working at an excavation site where appropriate sloping of side walls has been implemented as the excavation protective system</p>		<p>NO OSHA COMPARABLE</p>	

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<p><b>WAC 296-155-24611, Fall protection required at 10 feet or more.</b>            (ii) Fall protection is required for employees standing in or working in the affected area of a trench or excavation exposed to a fall hazard of ten feet or more and:            (A) The employees are not directly involved with the excavation process; or            (B) The employees are on the protective system or any other structure in the excavation.</p>		<p><b>1926.501(b)(7)</b>            "Excavations."  <b>1926.501(b)(7)(i)</b>            Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier;  <b>1926.501(b)(7)(ii)</b>            Each employee at the edge of a well, pit, shaft, and similar excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers.</p>	
<p><b>WAC 296-155-24613, Fall arrest specifications.</b>            (3) Catch platforms.            (a) You must install a catch platform within 4 vertical feet of the work area.            (b) The catch platform's width must be a minimum of 45 inches wide and must be equipped with standard guardrails and toe boards on all open sides.</p>	<p><b>DOSH proposes making the following change:</b>            (a) The catch platform's width shall be a minimum of forty-five inches wide, shall be equipped with standard guardrails and toe boards on all open sides <u>and shall be capable of supporting the maximum potential load with a safety factor of four.</u></p>	<p>NO OSHA COMPARABLE</p>	
<p><b>WAC 296-155-24615, Fall Restraint Specifications.</b>            (4) Warning line system specifications on pitches 4 in 12 or less for roofing work, leading edge work, and on low pitched open sided surfaces for</p>			<p>The issue here is that OSHA requires the use of a Safety Monitor System in conjunction with a Warning Line System for Roofing Work on Low slope roofs and DOSH does not.</p>

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work activities other than roofing work or leading edge work. You must ensure the following:			
<p><b>WAC 296-155-24615, Fall Restraint Specifications.</b>            (a) Warning lines must be erected around all unprotected sides and edges of the work area.            (i) Warning lines used during roofing work.</p>		<p><b>1926.502(f)</b>            "Warning line systems." Warning line systems [See 1926.501(b)(10)] and their use shall comply with the following provisions:  <b>1926.502(f)(1)</b>            The warning line shall be erected around all sides of the roof work area.</p>	
<p><b>WAC 296-155-24615, Fall Restraint Specifications.</b>            (A) When roofing work is taking place or when mechanical equipment is not being used, the warning line shall be erected not less than six feet (1.8 m) from the edge of the roof.</p>		<p><b>1926.502(f)(1)(i)</b>            When mechanical equipment is not being used, the warning line shall be erected not less than 6 feet (1.8 m) from the roof edge.</p>	
<p><b>WAC 296-155-24615, Fall Restraint Specifications.</b>            (B) When mechanical equipment is being used, the warning line must be erected not less than 6 feet (1.8 m) from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet (3.1 m) from the roof edge which is perpendicular to the direction of mechanical equipment operation.</p>	<p><b>DOSH proposes adding a bullet (C) to current standard:</b>            (C) When fall arrest systems as described in WAC 296-155-24613, or fall restraint systems as described in subsections (1) and (2) of this section are not used, a safety monitor system as described in subsection (5) of this section shall be implemented to protect employees engaged in roofing work on a low pitched roof, who are working between the forward edge of the warning line and the leading edge.</p>	<p><b>1926.502(f)(1)(ii)</b>            When mechanical equipment is being used, the warning line shall be erected not less than 6 feet (1.8 m) from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet (3.1 m) from the roof edge which is perpendicular to the direction of mechanical equipment operation.</p>	
<p><b>WAC 296-155-24615, Fall Restraint</b></p>		<p><b>1926.502(f)(2)(iv)</b></p>	

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<p><b>Specifications.</b> (iv) The rope, wire, or chain must have a minimum tensile strength of 200 pounds (90 k), and after being attached to the stanchions, must be capable of supporting, without breaking, the loads applied to the stanchions.</p>	<p><b>DOSH proposes making the following change:</b> The rope, wire, or chain shall have a minimum tensile strength of <del>two hundred pounds (90k)</del> <u>five hundred pounds(2.22 kN)</u>, and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions.</p>	<p>The rope, wire, or chain shall have a minimum tensile strength of 500 pounds (2.22 kN), and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions as prescribed in paragraph (f)(2)(iii) of this section; and</p>	
<p><b>WAC 296-155-24615, Fall Restraint Specifications.</b> (6) Safety watch system specifications. (a) When one employee is conducting any repair work or servicing equipment on a roof that has a pitch no greater than 4 in 12, employers are allowed to use a safety watch system. (b) Ensure the safety watch system meets the following requirements: (i) There can only be two people on the roof while the safety watch system is being used: The one employee acting as the safety watch and the one employee engaged in the repair work or servicing equipment; (ii) The employee performing the task must comply promptly with fall hazard warnings from the safety watch; (iii) Mechanical equipment is not used; and (iv) The safety watch system is not used when weather conditions create additional hazards. (c) Ensure the employee acting as the safety watch meets all of the following:</p>		<p>NO OSHA COMPARABLE</p>	

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<p>(i) Is a competent person as defined in WAC 296-155-24603;            (ii) Has full control over the work as it relates to fall protection;            (iii) Has a clear, unobstructed view of the worker;            (iv) Is able to maintain normal voice communication; and            (v) Performs no other duties while acting as the safety watch.</p>			
<p><b>WAC 296-155-680(10)(b)&amp; (c).</b>  <b>(10) Personal protective equipment.</b>            (b) You must not permit any employee to place or tie reinforcing steel more than 6 feet (1.8 m) above any adjacent working surface unless the employee is protected by personal fall arrest systems, safety net systems, or positioning device systems meeting the criteria of chapter <a href="#">296-155</a> WAC, Part C-1.            (c) You must protect each employee on the face of formwork or reinforcing steel from falling 6 feet (1.8 m) or more to lower levels by personal fall arrest systems, safety net systems, or positioning device systems meeting the criteria of chapter <a href="#">296-155</a> WAC, Part C-1.</p>			