Working at Heights

Risk Awareness and Hilti Tool Solutions

Understanding how the right systems can help reduce elevated work exposure and support a safer site.

Tool Box Talk

#1
Leading cause of construction fatalities in the US and Canada is falls from height
Source: OSHA and CCOHS industry safety data

50%
Of fatal falls involve no fall protection in use at the time of the incident
Source: OSHA construction fatality data

6ft
Even a fall from this height (approx. 1.8 m) can result in fatal or life-changing injury
Falls from low heights are a leading cause of serious injury — always apply fall protection early

80%
Of WAH incidents are estimated to be preventable through planning and correct control selection
Source: OSHA and CCOHS publicly available industry data

Solutions that may help reduce working-at-heights exposure

Always consult your company polices, local regulations, and manufacturer instructions before application.

Addressing WAH Hazards - Apply controls in order. Eliminate the hazard first. Use personal protection as final step.

WAH Hazard	Recommended Control Approach	Hilti Solution
Cable trip & entanglement at elevation	**ELIMINATE -** Keeping cords out of elevated work areas reduces the chance of stepping on or catching a line while moving or adjusting position. Cordless tools help maintain a clearer platform and reduce the need to handle or reposition cables during the task. Having fewer items underfoot supports steadier footing and better focus on the work.	Hilti Nuron 22V cordless platform eliminates trailing cable hazards at the source across a broad range of drilling, fastening, and cutting applications.
Overhead drilling — elevated exposure & physical strain	**ELIMINATE / REDUCE -** Overhead drilling increases strain on the shoulders and arms, and that strain builds the longer the task continues. Before working overhead, it's useful to confirm whether the task can be completed from the ground or with equipment that reduces the time spent in that posture. When overhead work is required, planning shorter work periods and using assistive tools helps keep workers more comfortable and controlled.	Jaibot semi-autonomous robot drills ceiling anchors from ground level via BIM/CAD plan. EXO-S exoskeletons may reduce fatigue risk for workers who must work overhead.
Repetitive trips to height for fixing tasks	**SUBSTITUTE -** Each climb on a ladder or lift is an exposure. Planning tools, materials, and fasteners on the ground helps reduce the number of trips needed. When workers go up with what they need for the task, it supports smoother workflow and reduces the total number of climbs during the shift.	Hilti actuated fastening systems (GX 3, BX 3) enable high-speed single-shot fastening for deck, ceiling track, and cladding rail — fewer trips, less cumulative time at elevation.
Excess time at height for layout & setup	**SUBSTITUTE -** Completing layout, measuring, and preparation on the ground limits the amount of detailed work that needs to be done while elevated. Ground-level preparation helps reduce time spent at height and supports more efficient, accurate installation once workers are in position.	Hilti laser layout tools (PLT 400, PM 30) enable accurate layout before crews go up. Combined with PROFIS/BIM, full anchor grids can be planned before any worker ascends.
Unplanned drilling errors & corrective rework at height	**ENGINEERING CONTROL -** IF drilling doesn't go as planned, any corrections usually need to be made while elevated, which increases exposure time. Performing checks at ground level — such as verifying locations or scanning for embedded materials — reduces the likelihood of rework. Getting it right the first time helps keep elevated time predictable and limited.	Hilti concrete scanning systems (PS 1000 X-Scan, PS 300 Ferroscan) detect subsurface hazards before the drill goes up.
Silica dust exposure during overhead concrete drilling	**ENGINEERING CONTROL -** During overhead drilling, dust generated can fall toward the worker's face and breathing zone. Using tools or attachments designed to capture dust at the point of drilling helps reduce airborne dust and improves visibility and comfort. Consistent use of these controls supports safer overhead work.	Hilti DRS dust removal systems capture silica at the source during drilling.
Uninspected or undocumented fall protection equipment	**ADMINISTRATIVE CONTROL -** Fall protection equipment can be affected by wear, environmental conditions, or past loading. Regular inspections and accurate documentation help confirm that harnesses, lanyards, and connectors are in acceptable condition before use. Verifying the status of equipment helps ensure it will perform as intended.	Hilti ON!Track tracks inspection status, service records, and equipment assignment. Digital inspection logs are auditable by GC safety teams and OSHA inspectors.

Can it be done at ground level?	Can exposure time be reduced?	Are controls correctly selected and documented?
Before any elevated task, ask whether a cast-in system, pre-installed anchor, or ground-level layout approach could remove the need to climb entirely — elimination is always preferred over protection.	If height work is necessary, consider whether faster tool systems — cordless platforms, actuated fastening tools — can help shorten the time the crew spends working at elevation.	Documenting the controls we choose helps us track what's in use and confirm equipment is in the right condition. Using digital systems that support inspection and tracking makes this easier and keeps our information up to date.

Your Hilti representative is available as a resource if you want to review equipment or approaches that may help support safer work at height.

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