OSHA 1926

FOCUS FOUR: STRUCK-BY

Recognize the line of fire. Separate people. Control movement.

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OBJECTIVES

Stop struck-by exposure before movement begins

01

Recognize

flying, falling, swinging, and rolling-object exposure.

02

Predict

blind spots, travel paths, fall zones, and stored movement.

03

Separate

people from vehicles, loads, tools, and unstable material.

04

Verify

communication, barriers, inspections, and task-specific PPE.

Field question: What can move, fall, swing, roll, or be ejected into a person?

WATCH + DISCUSS

Watch the backing path—then identify the controls

OFFICIAL OSHA PREVENTION VIDEO



LOOK FOR THREE CONTROLS

01 PATH

Who is inside the backing path—and why?

02 SIGNAL

What confirms it is safe to move?

03 SEPARATION

What keeps people out of the line of fire?

Discuss: Stop the movement, clear the path, and verify the signal before backing.

Source: OSHA Prevention Video (v-Tool); USDepartmentofLabor (YouTube), 2011

WHY IT MATTERS

Impact—not entanglement—is the defining struck-by event

A struck-by injury occurs when an object or equipment forcibly contacts a person. Prevention starts by removing the exposure or separating people from the line of fire.

FOUR PATHWAYS

Every struck-by event follows one of four movement patterns

01

FLYING

Fasteners, chips, fragments, or attachments become projectiles.

02

FALLING

Tools or material drop from an upper level or unstable stack.

03

SWINGING

Loads, booms, buckets, or rotating equipment sweep through space.

04

ROLLING

Vehicles, equipment, pipe, or stored material moves into a worker.

Name the movement first—then control the path, energy, and people.

Control the backing path before the vehicle moves

01	**SEPARATE**	Create pedestrian routes and equipment zones before traffic begins.
02	**INSPECT**	Inspect brakes, alarms, mirrors, cameras, lights, and warning devices each shift.
03	**BACK SAFELY**	With an obstructed rear view, use an audible reverse alarm or an observer.
04	**CONFIRM CLEAR**	Make sure personnel are clear before dumping, lifting, or moving.



A spotter supports the plan; the plan must also control entry and visibility.

Source: 29 CFR 1926.601(b)(4); OSHA Struck-By eTool

If the operator has not acknowledged you, stay out

01	**MAP THE ZONE**	Identify travel paths, turning radius, counterweight swing, and pinch points.
02	**MAKE CONTACT**	Use agreed signals or radio contact; never assume the operator sees you.
03	**WAIT FOR STOP**	Approach only after the equipment stops and the operator acknowledges you.
04	**STAY VISIBLE**	Use designated walkways and high-visibility apparel where traffic is present.



Visibility is not permission—positive communication comes first.

Source: OSHA Struck-By eTool; 29 CFR 1926.602

WHAT'S WRONG WITH THIS PICTURE?

Find the exposure before the truck moves another foot

01	**REAR VIEW**	Can the operator see the full backing path?
02	**OBSERVER**	Who is signaling that it is safe to back?
03	**PEDESTRIAN**	Why is a worker inside the equipment travel path?
04	**SEPARATION**	What barrier or designated route is missing?

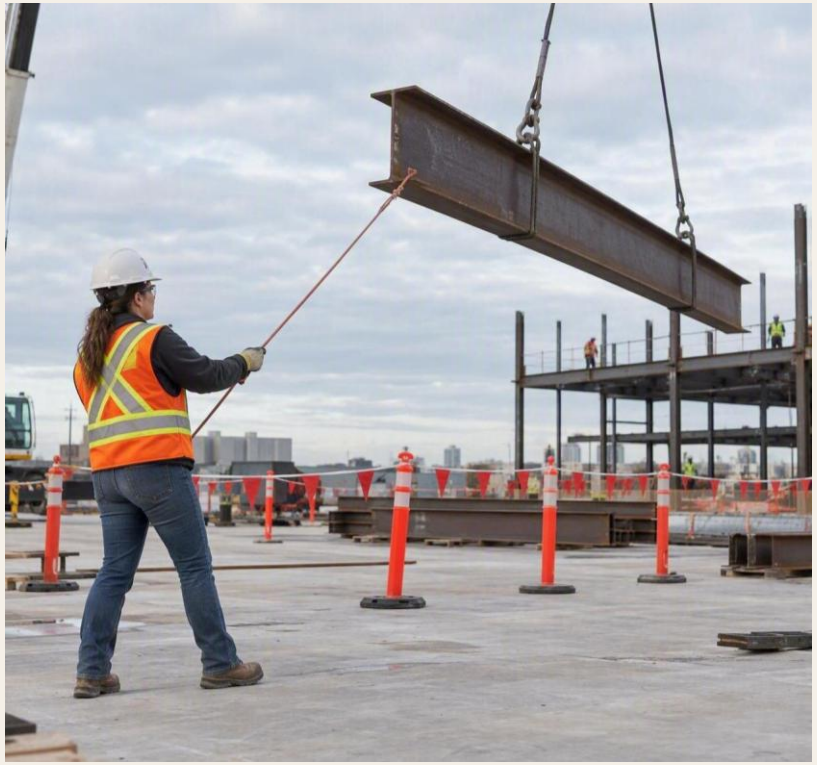


Discuss: Stop the movement, clear the path, then restore a controlled backing method.

Scenario: staged training image; Source: 29 CFR 1926.601(b)(4)

Control the swing radius and the load’s fall zone

01	**BARRICADE**	Mark and maintain the rotating-superstructure hazard area.
02	**KEEP CLEAR**	Route loads to minimize exposure and keep unnecessary workers out of the fall zone.
03	**RIG CORRECTLY**	Use inspected, marked rigging and qualified riggers for required load handling.
04	**COMMUNICATE**	Before entering an operator blind area, inform the operator and wait for acknowledgment.



Never stand beneath a suspended load; control the load from a safe position.

Source: 29 CFR 1926.1424–.1425; 1926.251

Secure tools and material before gravity starts the incident

01	**SECURE**	Stack, rack, block, interlock, or otherwise secure material against falling.
02	**RETAIN**	Use toe boards, screens, tool tethering, or equivalent controls for work above.
03	**BARRICADE**	Keep people out of drop zones and protect access routes below.
04	**PROTECT**	Use compliant head protection where impact from falling or flying objects is possible.



Hard hats reduce injury severity; they do not make a drop zone safe.

Source: OSHA Focus Four; 29 CFR 1926.250(a)(1); 1926.100

Guards and distance keep fragments out of people

01	**GUARD**	Keep manufacturer guards, safety clips, retainers, and tool attachments in place.
02	**AIM AWAY**	Position the task so fragments and sparks travel away from people and access routes.
03	**SCREEN**	Use barriers or clear the area when nearby workers could be struck.
04	**EYES + FACE**	Use impact-rated eye protection with side protection and face protection as needed.



A face shield supplements—not replaces—required safety glasses or goggles.

Source: 29 CFR 1926.302(b); 1926.102

Block movement before stored material can release

01	**STACK**	Rack, block, interlock, or otherwise secure tiers against sliding or collapse.
02	**CHOCK**	Use chocks and dunnage sized for pipe, conduit, drums, or cylinders.
03	**PARK**	Set parking brakes; on inclines, set the brake and chock wheels.
04	**CLEAR AISLES**	Maintain safe access for workers and material-handling equipment.



Do not place hands, feet, or bodies downhill or in the release path.

Source: 29 CFR 1926.250(a); 1926.600(a)(3)

Separate workers from public traffic and site equipment

01	**PLAN THE FLOW**	Define entry, exit, haul routes, pedestrian paths, and equipment staging.
02	**CHANNEL**	Use signs, cones, barricades, and positive protection appropriate to the work.
03	**SIGNAL CLEARLY**	Use trained flaggers and standardized signals where traffic must be controlled.
04	**STAY VISIBLE**	Wear required warning garments and face traffic from a protected position.



A vest improves detection; it does not replace separation from moving vehicles.

Source: 29 CFR 1926.201(a); MUTCD Part 6; OSHA Work Zones

Match PPE to the struck-by hazard that remains

01	**HEAD**	Protective helmet for possible impact or falling/flying objects.
02	**EYES + FACE**	Impact-rated eye protection with side protection; add face protection when needed.
03	**VISIBILITY**	High-visibility warning garments for flagging and applicable work-zone exposure.
04	**FEET + HANDS**	Protect against crush, puncture, sharp edges, and handling hazards identified for the task.



Select PPE for the specific hazard, inspect it, and never use it to justify exposure.

Source: 29 CFR 1926.100–.102; 1926.201(a)

WHAT'S WRONG WITH THIS PICTURE?

Scan the load, the swing zone, the ground, and the people

01	**PEOPLE**	Who is inside the fall zone or beneath the suspended load?
02	**LOAD**	Is the rigging secure, controlled, and free from unintentional displacement?
03	**SWING ZONE**	Where is the barrier around the rotating superstructure?
04	**MATERIAL**	What could roll or shift, and where are the chocks?



Discuss: Stop the lift, clear people, barricade the zone, and secure loose material.

Scenario: staged training image; Source: 29 CFR 1926.1424–.1425; 1926.250

KNOWLEDGE CHECK 1 OF 3

A dump truck has an obstructed rear view. What must control backing?

A — Camera only

B — Audible reverse alarm or observer signaling it is safe

C — High-visibility vest only

Choose, then press the space bar.

ANSWER 1 OF 3

Use an alarm or an observer when the rear view is obstructed

OSHA permits either a reverse signal alarm audible above surrounding noise or backing only when an observer signals it is safe. A camera can support—but does not replace—the required method.

KNOWLEDGE CHECK 2 OF 3

Who may enter a suspended load's fall zone?

A — Anyone wearing a hard hat

B — Only employees needed for specified load-handling tasks under required controls

C — Anyone directed by the operator

Choose, then press the space bar.

ANSWER 2 OF 3

Only necessary employees performing specified tasks may enter

When the load is stationary, OSHA limits entry to employees hooking, unhooking, guiding, making the initial attachment, or operating a concrete hopper or bucket—and required rigging controls still apply.

KNOWLEDGE CHECK 3 OF 3

What controls a grinder’s flying particles?

A — Safety glasses only

B — Guard, position away, screen or clear others, and eye/face protection

C — Warn others after starting

Choose, then press the space bar.

ANSWER 3 OF 3

Guard the source, control the path, and protect exposed people

Keep the tool guard and attachments in place, aim fragments away, screen or clear the area, and use impact-rated eye protection with side protection plus face protection as needed.