TOOLBOX TALK: GUARDRAILS

Job or site _____

Date _____

Led by _____

Open with this

Everybody point at a guardrail on this site. Now tell me, without touching it, whether it would stop a man who tripped and fell against it sideways. That is the whole talk.

The talk

The top rail sits at 42 inches, plus or minus 3. That is a real tolerance, so 39 to 45 is legal and 38 is not. If anybody here is on stilts, the rail has to go up by the height of the stilts, which nobody ever does.

It has to take 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along it. Not at the post. At any point, including the middle of the longest run, which is where it is weakest and where a falling man will hit it.

There is a second half to that test everybody forgets. When the 200 pounds is pushed down, the top edge must not drop below 39 inches. A rail that takes the load by bending to thigh height has failed, because a man going over it is exactly what it was there to stop.

Between the top rail and the deck there has to be something: a midrail halfway up, or screen, or mesh, or balusters no more than 19 inches apart, unless there is a wall or parapet at least 21 inches high. Whatever fills that gap has to take 150 pounds in any downward or outward direction.

Some materials are simply out. Steel banding and plastic banding shall not be used as top rails or midrails, and that is a flat prohibition with no exception in it. Rails have to be at least a quarter inch thick to stop them cutting, and if wire rope is used for a top rail it has to be flagged at no more than 6 foot intervals in high visibility material.

Holes and openings have their own rules. Guardrails go on every unprotected side of a hole. Where a hole is used for passing materials, no more than two sides get removable sections, and when it is not in use it gets covered or railed all the way round. Where the hole is a ladderway, it gets a gate or the rail gets offset so nobody can walk straight into it.

And at a hoisting area, the access opening gets a chain, a gate or a removable section across it whenever hoisting is not happening. That gap is open on purpose and everybody stops seeing it by the second day.

Point at these before anybody starts

- The longest unsupported run of top rail on this site, which is the weakest point on it.

- Any rail made of banding, rope or anything that was never designed to be a rail.

- The gap between the top rail and the deck, and what is actually filling it.

- Every hoisting opening and ladderway, and whether it has a gate or a chain.

- Any hole cover on this site that is not secured and not marked.

- The one rail here that somebody has already had to lean on this week.

The rules that apply

- Top edge height shall be 42 inches plus or minus 3 inches above the walking or working level, increased by the height of any stilts in use.

- The system shall withstand without failure a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge.

- Under that 200 pound load applied downward, the top edge shall not deflect to a height less than 39 inches above the walking or working level.

- Midrails go midway, screens and mesh go top rail to deck across the full opening, and intermediate members go no more than 19 inches apart, with no opening wider than 19 inches.

- Midrails and equivalent members shall withstand at least 150 pounds applied in any downward or outward direction at any point.

- Steel banding and plastic banding shall not be used as top rails or midrails, and wire rope top rails shall be flagged at not more than 6 foot intervals.

Ask the crew

- How high is the top rail, and how far can it bend before it has failed?

- Where on a run of guardrail would you apply the test load if you wanted it to fail?

- Name one opening on this site that is protected only because nobody has walked into it yet.

Close with this

Forty two inches, two hundred pounds, anywhere along it. Everything else is a rail somebody put up to feel better.

Attendance

Everybody who was present signs, including subcontractors and anybody visiting the site.

	Print name and signature
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This talk is general safety information for a crew briefing, not legal advice and not a substitute for the training your employees are required to have. Standards are quoted for orientation only. Check the current text of the standard and your own state plan, which may be stricter than the federal rule.