CONSTRUCTION SAFETY DESIGN SOLUTION #13
DESIGN CATEGORY: SITE
HAZARD: FALLS FROM STATIONARY FLATBED TRAILERS
DESIGN SOLUTION: TRANSPORTABLE ANCHOR POSTS

This design solution reduces the risk of serious falls from stationary flatbed trailers. When a truck is on the road, it is controlled by DOT regulations. However, when vehicles are stopped for loading and unloading the flatbed trailer is in effect a working/walking surface. While OSHA 1926 excludes trucks and trailers from the agencies definition of ”working/walking surface” thereby exempting these areas from fall protection requirements, using the same safety precautions that apply to open sided floors six feet above a lower level to loading and unloading of flatbed trailers makes sense. Many truck drivers and ironworkers unloading the steel have been seriously injured falling from flatbeds while removing tiedown straps and misstepping or being hit by swinging suspended steel. Falls backwards from the deck usually result in severe head injury. BLS data shows that in 2010 76 workers were killed and 9,330 workers suffered a day way from work injury as a result of falling from a nonmoving vehicle. In that same year, 1,190 workers suffered a day away from work injury as a result of jumping from nonmoving vehicles.

SOLUTION

This solution alternative reduces 5-8’ fall hazards from stationary flatbed trailers when delivering steel shapes (beams and girders) to construction sites. Transportable anchor posts positioned at each end of the trailer enable harness access with fall protection as demo shows. The centering of the anchorage point is achieved by sliding under the trailer using the appropriate sized wheels for the environment allowing fork lift access. However if the site crane is removing the steel then the equipment can be moved over slightly to avoid collision.

The photo to the left shows anchor posts with harness access being used by workers to unload steel from a flatbed trailer.

BACKGROUND INFORMATION

Fall protection for unloading trailers at construction sites should comply with 1926.501(b)(15) and 502(d)(15/16).

ANSI A10.32-2004 equipment requirements including anchorage strength will be satisfied by this arrangement as will ANSI Z359.1-2007.

OTHER CONSIDERATIONS

Other designs besides that shown are wheeled to suit the terrain and transported by pick up in collapsed form. The hoists can be manual to lift the rail. The SRL's run on the small steel I-beam by trolley to remain overhead for ironworker access. The SRL is pulled down by a tag line which is stuffed in a pocket after the SRL snaphook is attached to their harness back D-ring. Specification: approx 3600 lbs, height 18 ft.

LIFE CYCLE SOLUTION BENEFITS

This solution is a simple procedure for many work sites and can be set up quickly. The application should be reliable for many years with sturdily built equipment.