PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 1600 as follows:

§1600. Pile Driving.

(a) A danger zone shall be clearly delineated around the operating hammer where employees involved in cutting, chipping or welding operations shall be prohibited so as to protect them from the hazards of falling objects.

(1) The employer shall establish the danger zone.

(2) The danger zone shall be maintained under the supervision of a competent person.

(b)~~(a) When conditions are such that a worker might logically be expected to work or be under the hammer, the hammer shall be secured in the leads by means of an adequate chock, toggle, or other device to safely support the hammer.~~ A blocking device capable of safely supporting the weight of the hammer shall be provided for placement in the leads under the hammer and used at all times while employees are working under the hammer.

EXCEPTION: Where it is necessary for a worker, momentarily, to lean through the leads to spot a pile under hammer, it is not required that the hammer be secured in the leads.

~~(b) Steam hose leading to a steam or jet pipe shall be securely attached to the hammer with an adequate length of at least 1/4 inch diameter chain or equivalent rated capacity wire rope to prevent whipping in the event the joint of the hammer is broken. Air hammer hoses shall be provided with the same protection as required for steam lines.~~

(c) Steam and air hammer hose connections.

~~Safety chains, or equivalent means, shall be provided for each hose connection to prevent the line from thrashing around in case the coupling becomes disconnected.~~

(1) All pile driver hose connections including those to pile driver hammers, pile ejectors, or jet pipes shall be securely tethered with an adequate length of at least ¼ inch (0.635 cm) alloy steel chain having 3,250 pounds (1,500 kg) rated capacity (working load limit), or equivalent strength alloy steel cable to prevent the line from thrashing around in case the coupling becomes disconnected.

(2) Chains or wire rope shall not be shortened with knots, bolts or other makeshift devices.

(d) ~~Wherever it is necessary for workers to work aloft on pile drivers in normal operation, working platforms shall be provided.~~

~~Such~~ When used, platforms shall be of sufficient size so that the ~~worker~~ employee can easily avoid contact with the hammer. It shall be surrounded on all sides, except between the hammer leads, with a railing or guard line 42 ~~inches~~ to 45 inches in height. Guard lines shall be ~~drawn~~ taut and ~~shall be~~ at least 3/8 inch wire rope~~, or 1-inch Manila rope~~ or equivalent. If ~~rigid~~ railings are used, they shall be constructed in accordance with ~~provisions of~~ Section 1620.~~, Article 16, with the~~

EXCEPTION: ~~that~~ Pipe or structural steel railings ~~may be used if~~ of equivalent strength may be used.

(e) ~~Precautionary measures~~ Precautions shall be taken to ensure that objects are secured against wind and accidental displacement, to ~~which will~~ prevent tools, material, and equipment from

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falling off elevated platforms. ~~There shall be a toe board at least 3 1/2 inches high~~ Toeboards shall be installed on all sides of the platform in accordance with Section 1621(b).

(f) ~~Fixed~~ lLeads shall be provided with a ladder~~,~~ and adequate rings, or similar attachment points, so that the ~~loft worker~~ employee may engage ~~the~~ a personal fall ~~arrest~~ protection system to the leads. The personal fall ~~arrest~~ protection system ~~used~~ shall comply with the requirements of ~~Section 1670~~ Article 24. ~~If the leads are provided with loft platform(s), such platform(s) shall be protected by standard guardrails.~~

(g) Stirrups shall be provided for use on sheet piles or a mechanical device shall be used to guide the pile into place. If ~~a worker~~ an employee is required to go aloft on sheet piling, the ~~worker~~ employee shall use an aerial device or ladder ~~or be carried up in a boatswain's chair~~.
EXCEPTION: Where it is unsafe to use an aerial device or ladder, a boatswain's chair may be used in accordance with Section 1662.

(h) ~~The worker~~ Employee(s) shall not ride the hammer.

(i) Where work is to be performed, walkways at least 20 inches in width shall be provided across piles or other open work with the exception of those piles on which the driver is standing.

(j) Where a drop hammer is used for driving piling other than sheet piling, a driving head or bonnet shall be provided to bell the head of the pile and hold it true in the leads.

(k) Ring buoys shall be provided in accordance with Article 13 and located where readily available at intervals not exceeding 200 feet on all structures over water under the course of construction.

Where ~~workers~~ employees are concentrated in groups, there shall be additional ring buoys consisting of not less than 1 additional buoy for each 25 ~~workers~~ employees in that area. Portable standards or equivalent means to hold the ring buoys in plain view shall be provided. Life saving boats shall be provided in accordance with Article 13.

(*l*) All floating rigs, with the exception of small work rafts or pontoons, shall be equipped with at least 2 ring buoys.

(m) In every crew there shall be a designated signaler, and the engine ~~operator~~ or winch operator shall receive signals from no other except, ~~however,~~ that when ~~a worker~~ an employee is aloft, the hammer shall not be moved except on the signal of the ~~worker~~ employee aloft.
NOTE: For recommended standard hand signals, see Plate C-11.

(n) All deck engines, not operated by an operator on the throttle sides, shall be equipped with a cross extension of the throttle that is within the reach of the spool tender.

(o) Every hoisting drum used on a pile driver that uses a dog and ratchet arrangement to hold it in position shall be equipped with an adequate dog. This dog shall be readily visible from the engine operator's station or shall be provided with a directly connected and positive telltale device ~~which~~ that will be visible.

(p) No arrangement of counterweights or springs on the dog shall be permitted which will allow the dog to be automatically disengaged either by relieving the load or rotating the drum.

(q) Stop blocks shall be provided for the leads to prevent the hammer from being raised against the head block.

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(r) When the leads must be inclined in the driving of batter piles, provisions shall be made to stabilize the leads.

(s) Steam line controls shall consist of two shutoff valves, one of which shall be a quick-acting lever type within easy reach of the hammer operator.

(t) Guys, outriggers, thrustouts, or counter-balances shall be provided as necessary to maintain stability of ~~the~~ pile driver rigs.

(u) All employees shall be kept clear when piling is being hoisted into the leads.

(v) When steel tube piles are being "blown out," employees shall be kept well beyond the range of falling materials.

(w) When driving jacked piles, all access pits shall be provided with ladders and bulkheaded curbs to prevent material from falling into the pit.

NOTE: Section 5158 of the General Industry Safety Orders prescribes the minimum standards for preventing employee exposure to dangerous air contamination and/or oxygen deficiency in confined spaces.

(x) Hoisting of piling shall be done by hooks provided with a means to prevent accidental disengagement or a shackle shall be used in place of a hook.

(y) Taglines shall be used for controlling unguided piles and free hanging (flying) hammers.

(z) Hammers shall be lowered to the bottom of the leads while the pile driver is being moved.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 1601 as follows:

§1601. Methods of Unloading Piles.

~~(a) Hand Unloading From Trucks and Trailers. The following method shall be used in unloading piles from a truck or trailer when the load is to be rolled off one side by hand. This method shall not be attempted unless trucks and trailers are equipped with bunk chocks arranged so as to be released from the side opposite that from which the load is to be dumped, and at least 2 binder chains encircle the load of piles. Binders shall be arranged so that their release is accomplished from the side opposite that from which the load is to be dumped.~~

~~(1) Piles shall be prevented from coming off on the wrong side of the vehicle by tilting the vehicle body so that the unloading side is approximately 10 inches below the opposite side or by securely bracing the load on one side with at least 2 timber shores, 4 inches by 6 inches in cross section, or material of equivalent strength. In tilting the vehicle, advantage may be taken of sloping ground or a special device may be used.~~

~~(2) Chocks and binders are to be released from a safe position after the requirements of Order 1601 (a)(1) have been complied with.~~

~~(3) If skids are used, they shall be in place before the binders or chocks are released.~~

~~(4) When it is necessary to use peaveys to remove the last piles from the truck or trailer, the workers shall work from the ends of the load and shall stand clear of the area exposed to rolling piles.~~

~~(b) Power Unloading From Trucks and Trailers. If power is to be used, the following method of rolling the load off one side shall be followed in unloading piles from a truck or trailer, unless an equally safe power method is used in which no individuals are exposed to the hazard of rolling or falling piles:~~

~~(1) Before the load is released, a bridle from the source of power shall be passed over the load from the unloading side, then passed under the load and the 2 ends secured at separate points to the unloading side of the vehicle or to dead men. After it is pulled taut, the chocks and binders may be released from a safe position, additional power being applied as necessary to complete unloading.~~

~~(2) All requirements and limitations for unloading by hand, as described under Order 1601 (a), shall be followed, with the exceptions of (1) and (2).~~

~~(c) Hand Unloading From Flat Cars. The following method shall be used in unloading piles from a flat car when the load is to be rolled off one side by hand:~~

~~(1) Skids shall be set on the unloading side of the car and secured to the car or to the bolsters under the piles. The upper end of the skids shall be below the lower layer of piles.~~

~~(2) At least 2 shores not smaller than 4-inch by 6-inch timbers shall be braced against the side opposite the unloading side of the load, with the upper end of the shores secured to car stakes or wedged against a pile in the second or third layer from the top. These shores shall be set near each bolster.~~

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~~(3) Car stakes on the unloading side shall be notched approximately 1/4 of their thickness just above stake pockets.~~

~~(4) Binder wires or straps shall be cut on unloading side, with the exception of the top and bottom wires or straps which shall be cut from the opposite side after the other cutting is complete.~~

~~(5) When it is necessary to use peaveys to remove the last piles from the flatcar, the workers shall work from the ends of the load and shall stand clear of the area exposed to rolling piles.~~

~~(d) Power Unloading from Flat Car. The following method of rolling the load off 1 side shall be followed in unloading piles from a flat car, unless an equally safe power method is used in which no individuals are exposed to the hazard of rolling or falling piles:~~

~~(1) Skids shall be set on the unloading side and secured to the car or to the bolster under the load.~~

~~(2) A bridle from the source of power shall be passed over the load from the unloading side, then passed under the load and the ends secured to the unloading side of the car and a strain taken on the line.~~

~~(3) Car stakes on the unloading side shall be notched approximately 1/4 of their thickness just above the stake pockets.~~

~~(4) Binder wires or straps shall be cut on the unloading side with the exception of the top and bottom wires or straps which shall be cut from the opposite side after the other cutting is complete.~~

~~(5) Additional tension may thus be applied to the bridle from the power source so as to remove the load.~~

Piles shall be unloaded in a controlled manner so that employees are not exposed to the hazard of rolling or falling piles.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.