

Group V Proposals: MRL-Related only

NEII® Summary of Key Proposals

KEY:

- **Description of related requirements in ASME A17.1 (2013)**
- **Current requirements (Group IV) in CA**
- **Description of Group V proposal**

3147.2207(a)

- A17.1 §2.7 permits access to machinery and control spaces inside hoistway from pit, car-top, a platform or inside car.
- Group IV is silent on working platforms and does not restrict working from inside the car.
- Proposal would eliminate access from a platform and from inside the car.

3147.2207(b)

- A17.1 §2.7.2 requires a safe and convenient access path in machinery spaces and control spaces.
- MRL equipment locations are not addressed in Group IV.
- Proposal would impose new, prescriptive requirements with specific measurements of where equipment can be located.

3147.2207(c) and (d)

- A17.1 §2.7.3.1 permits equipment access from the pit, car-top, platform or inside the car. From these locations the access shall be a safe and convenient path.
- Accessing MRL equipment not addressed in Group IV.
- Proposal states that machinery spaces and control spaces inside the hoistway that cannot be accessed by an 18” minimum clear path as specified in 3147.2207(b), must be accessed from outside the hoistway through a machine room or control room.

3147.2207(e)

- A17.1 section 2.7.3.3.2 permits access to some overhead machinery spaces by ladder, except those containing controllers and motor generators.
- Machinery space access not addressed in Group IV
- Proposal specifies that drive machines, in addition to controllers and motor generators, are not permitted to be accessed by ladders.

3147.2207(f) and (g)

- A17.1 sections 2.7.4.1 and 2.7.4.2 require elevator machine rooms, control rooms and control spaces that are not in a hoistway to have an 84” minimum head clearance and exempts when located in hoistway.
- MRL equipment locations are not addressed in Group IV.
- Proposal would require an 84” minimum head clearance when drive machine is inside hoistway.

3147.2207(h)

- A17.1 section 2.7.5.1 permits maintenance or inspection of the elevator machine drive brake, emergency brake, elevator motion controller or motor controller can be carried out from inside the car or from the top of the car.
- MRL equipment location not addressed in Group IV.
- Proposal deletes the reference to maintenance or inspection from inside the car, and prohibits maintenance or inspection of motion controllers or motor controllers from car top.

3147.2207(i)

- A17.1 section 2.7.5.1.1 requires a means to prevent vertical car movement where inspection or maintenance of the driving machine brake, emergency brake, motion controller or motor controller, done from inside the car or from the car top, can cause unexpected vertical car movement.
- Machines in hoistway are allowed but their maintenance is not addressed in Group IV.
- Proposal deletes reference to inspection or maintenance of elevator motion controllers or motor controllers from the car top, and all four components from inside the car.

3147.2207(j)

- A17.1 section 2.7.5.1.3 permits use of car top emergency exit to egress and re-enter the car when the means to prevent vertical car movement is engaged.
- Means to prevent car movement not addressed in Group IV.
- Proposal deletes the car top emergency exit as an option to egress or re-enter the car and requires that the car-top shall be level with the landing and egress be provided through the hoistway landing door.

3147.2207(k)

- A17.1 section 2.7.6.3.2 permits a motor controller to be located outside of a machinery space, machine space, control space or control room, provided it is enclosed in a locked cabinet, with specific requirements for the cabinet.
- MRL equipment locations are not addressed in Group IV.
- Proposal prohibits separate cabinet for motor controller and requires motion and motor controls to be located in a control room or machine room. Additionally, the distance from the room's door must be no more than 25 ft (unobstructed path) to the elevator hoistway door or nearest hoistway door for a group of elevators.

3147.2207(l)

- A17.1 section 2.7.6.3.4(a) allows when a governor is located inside a hoistway, it to be inspected or serviced from an adjacent car.
- Not addressed in Group IV.
- Proposal deletes using the adjacent-car option for testing the governor.

3147.2207(m)

- A17.1 section 2.7.6.4 requires that where an elevator driving-machine brake or an emergency brake or an elevator motion controller or motor controller is located in a hoistway or pit, means necessary for tests that require movement of the car or release of the driving-machine brake or emergency brake, shall be provided/arranged so they can be operated from outside the hoistway.
- MRL equipment locations are not addressed in Group IV.
- Proposal deletes reference to an elevator motion controller or motor controller being located in the hoistway or pit.

3147.2207(n)

- A17.1 section 2.7.6.4.2 permits testing means to be located in an inspection and testing panel.
- Not addressed in Group IV.
- Proposal prohibits this option and requires the testing means to be located in a machine room or control room.

3147.2207(o)

- A17.1 section 2.7.9.1 requires permanently installed lighting illumination at the standing surface of a working platform or car top.
- Working platforms are not addressed in Group IV.

- Proposal deletes reference for lighting to working platform and car top standing surface.

3147.2208

- A17.1 section 2.8.3.3.2 does not address the location of shunt trip devices or elevators without Phase I Recall. Section 2.8.5.1 permits air conditioning equipment inside the hoistway.
- Not addressed in Group IV.
- Proposal prohibits air conditioning equipment inside the hoistway.

3147.2214(f)

- A17.1 section 2.14.3.2 permits openings in car tops to be used for equipment access.
- Access to MRL equipment is not addressed in Group IV.
- Proposal deletes access panels, including panels on the car top, to access equipment.

3147.2226(a) and (b)

- A17.1 section 2.26.1.4 permits operating devices and control equipment to be located:
 - On the top of the car; at an inspection/test panel; in the car; in a machinery space outside the hoistway; in a machine room; in a control space outside the hoistway; in a control room; in the pit; and, at a working platform.
 - Permits a device to allow additional motion into overhead.
- MRL equipment locations are not addressed in Group IV.
- Proposals allow Inspection Operation only in control room, machine room or car top. Prohibits device to bypass Electrical Protective Devices (EPDs) to move into overhead.

3147.2226(c) and (d)

- A17.1 section 2.26.1.4.4 permits inspection operation from machinery and control spaces outside the hoistway, pits, landings, working platforms, machine rooms and control rooms. A17.1 section 2.26.1.5 permits Car Door Bypass and Hoistway Door Bypass switches in a control room, a control space, the machine room, a machinery space, a motor controller or an inspection and test panel.
- MRL equipment locations are not addressed in Group IV.
- Proposal prohibits inspection operation from machinery and control spaces outside the hoistway, pits, landings and working platforms. Proposal also prohibits the referenced switches from being located in a machinery or control space, a motor controller or an inspection and test panel.

3147.2307

- A17.1 section 3.7.1 provides requirements for hydraulic elevators that coincides with electric elevator requirements for driving machines and emergency brakes.
- Group IV has restrictions similar to those in the proposal.
- Proposal eliminates hydraulic machines in the hoistway and pit, access to machinery and control spaces inside the hoistway and pit, and the inspection and testing means panel.

3147.2319(a)-(d)

- A17.1 section 3.19.2.7 contains requirements for hydraulic machines inside hoistway.
- A17.1 section 3.19.2.5 contains requirements for pressure gauge fittings for hydraulic machines located in a hoistway.
- A17.1 section 3.19.4.1 contains requirements for shutoff valves for hydraulic machines inside hoistway.
- A17.1 section 3.19.4.4 contains requirements for manual lowering valves for hydraulic machines inside hoistway.
- Group IV has restrictions similar to those in the proposal.
- Proposal deletes these provisions, eliminating hydraulic machines and associated components inside the hoistway.

3147.2324

- A17.1 section 3.24.3.1 contains requirements for covers and venting for tanks located in the hoistway.
- Group IV has restrictions similar to those in the proposal.
- Proposal eliminates the requirements for venting of tanks inside the hoistway.

3147.2202(c)

- A17.1 section 2.2.4.2.2 permits ladder rungs, cleats or steps to be reduced from 16” width to the maximum space available but not less than 9” where obstructions are encountered.
- Group IV applies A17.1-2004 which permits reducing ladder width to 9”.
- Proposal restricts reduction of ladder width due to obstructions to no less than 14”.

3147.2203

- A17.1 section 2.3.2.3 requires that where a counterweight (CWT) is located between elevators in a multiple-elevator hoistway, the CWT runway shall be guarded on the side next to the adjacent elevator.
- Group IV requirement is the same as proposal.
- Proposal requires the guarding to extend an additional 6” minimum beyond each CWT rail.

3147.2204(a)

- A17.1 section 2.4.2.1 requires that where oil buffers are used the bottom runby shall be 6” minimum, except:
 - Where practical difficulties prevent a sufficient pit depth or where a top clearance cannot be provided to obtain the runby specified, it shall be permitted to be reduced.
 - Where spring return oil buffers are used, the runby is permitted to be eliminated.
- Group IV allows the same exception as A17.1-2013.
- Proposal does not permit exceptions allowed in current Group IV and A17.1.

3147.2204(b)

- Section 2.4.7.1 requires a 43” minimum vertical clearance between the car top and lowest part of the overhead structure when the car reaches its maximum upward movement. Areas outside the standard railing, where provided are not considered as safe occupied areas and are marked accordingly.
- Group IV only addresses car top railing for fall protection.
- Proposal deletes the exclusion for areas outside the standard railing in this measurement.

3147.2204(b)(a) & (b)(b)

- A17.1 section 2.4.7.1(a) requires a 24” clearance above the car crosshead assembly and 6” minimum above the sheave assembly, except as permitted in 2.4.7.1(b).
- Group IV requires 24” and did not recognize the special case exemption.
- Proposal excludes the exceptions permitted in 2.4.7.1(b)

3147.2204(c)

- A17.1 section 2.4.7.2 requires any 14” area within the railing, if provided, to be marked if the vertical clearance in that area is less than 43”.
- Group IV requires any area on the car top to be marked which lacks required vertical clearance.
- Proposal deletes the exception for marking outside of the railing and the reference to Appendix G which shows diagrams of the required car top clearances.

3147.2214(d)

- A17.1 section 2.14.1.7.1 requires a standard railing on outside perimeter of car enclosure on all sides where perpendicular distance between the edges of the car enclosure top and the adjacent hoistway enclosure exceeds 12" horizontal clearance and on sides where there is no hoistway enclosure. Where the railing is required to be more than 4" from the edge of the outside perimeter of the car enclosure top, the top of the car enclosure outside of the railing shall be clearly marked.
- No railing set-back requirements are addressed in Group IV.
- Proposal reduces from 4" to 2" the outside perimeter clearance from the edge of the car enclosure top to the distance that requires the enclosure outside of the railing to be clearly marked.

3147.2214(e)

- A17.1 section 2.14.1.7.2 specifies that when the car has reached its maximum upward movement, the following clearances must be provided from the top rail of the standard railing to building structure or equipment not attached to the car:
 - 4" vertically;
 - 4" horizontally in the direction towards the hoistway enclosure;
 - 12" horizontally towards the centerline of the car enclosure top.
- Group IV adopted A17.1 2004 requirements.
- DOSH Group V proposal increase minimum clearances from the standard railing to the counterweight assembly and to fixed electrical, mechanical or structural objects not attached to the car that create a horizontal projection into the hoistway as follows:
 - 12" horizontally at any position in the hoistway in the direction of hoistway walls; may be reduced to 102mm (4in) for suspension means, governor rope(s) and governor rope(s) guards, selector tape(s), traveling cable(s), flexible metal conduit, and for:
 - Car rail brackets less than 18" in horizontal length; traveling cable hangers mounted on hoistway wall; horizontal mounting brackets and assemblies mounted to guard rails no longer than 6"; horizontal mounting brackets and assemblies mounted to guide rails longer than 6" and beveled on underside; Horizontal electric raceways attached to hoistway wall protruding less than 2" into hoistway; Vertical electrical raceways attached to hoistway wall; and, Hoistway recesses or projections that are beveled.
 - 12" vertically at the extreme limit of travel
 - 24" horizontally towards the centerline of the car top at any position in the hoistway.

3147.2220(c)

- A17.1 section 2.20.8.3 requires all electric traction elevators, excluding steel wire ropes, to be provided with a residual strength detection means.
- Alternate suspension means not addressed in Group IV.
- Proposal requires a residual strength detection device.
 - The proposal also requires "proven technology" that "effectively monitors" the physical properties and the "actual residual strength" of the suspension members.

3147.2214(c)

- A17.1 section 2.14.1.6.2 requires all elevators to provide two unobstructed areas 14" x 14" and at least 24" apart.
- Group IV requires one unobstructed refuge space 5.4 ft² and shall not be less than 24" on any side.
- Proposal requires one unobstructed refuge space 5.4 ft² and shall not be less than 24" on any side.

3147.2201(b)

- A17.1 section 2.1.6.2 requires beveling where recesses or setbacks exceed 4" unless covered with a conforming material.

- Group IV modified the A17.1-2004 4" setback to 2".
- Proposal reduces the 4" requirement to 2" with additional beveling on items defined within 3147.2214(e).