

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

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Walking-Working Surfaces General Industry Safety Orders Article 2 Fall Protection

Advisory Committee Meeting Minutes

March 5-6, 2025

9:00 AM - 4:30 PM

May Lee Office Complex
651 Bannon St – Room MPC SE 158A/B
Sacramento, CA 95811

Chair

Maryrose Chan, Senior Safety Engineer

Analyst

Tishara Davis, Regulatory Analyst

Standard's Board Staff

Mille Barajas, Executive Officer

Steven Smith, Principal Safety Engineer

Michelle Iorio, Attorney

Participants

| Name | Organization |
|---------------------|--|
| Robert Armstrong *+ | Pacific Gas and Electric |
| Paul Anderson*+ | OSHA Compliance Services |
| Kevin Bland * | Ogletree, Deakins, Nash, Smoak& Stuart, P.C. |
| Jamie Carlile * | Southern California Edison |
| Rob Carrion*+ | Operating Engineers, Local 3 |
| Michael Donlon*+ | MD Safety Service |
| Rinaldo Edmonson*+ | Marathon Petroleum |
| Mike Hein* | Con-Fab California LLC |
| Cassie Hilaski* | Nibbi Brothers General Contractor |
| Steve Johnson*+ | Associated Roofing Contractor |
| Thomas Kramer*+ | Former ANSI Z359 Chair, LJB Inc. |

| Name | Organization |
|-------------------|--------------------------------|
| Dan Leacox*+ | Leacox & Associates |
| Raymond Mann*+ | 3M |
| Larry McCune* | Cal/OSHA |
| Adrian Medrano*+ | CJ America, Inc |
| Spencer Price*+ | Cal/OSHA |
| Carlos Serrano*+ | Lamar Advertising |
| Andrew Siersema*+ | McClone Construction |
| Matt Smylie*+ | Ford Construction |
| Kevin Thompson* | Cal/OSHA Reporter |
| Gregg Tinker*+ | Tower Safety Services |
| Len Welsh* | California Framing Association |
| Yancy Yap*+ | Cal/OSHA |

* Attended Day 1

+ Attended Day 2

Summary of Rulemaking Topic

The advisory committee convened to review and discuss the proposed changes to Article 2 of the General Industry Safety Orders. California must be at least as effective as the Federal Walking-Working Surfaces standard, which was published in the Federal Register on November 18, 2016.

Announcements

Thomas Kramer, LJB Inc.

Ballusted Guardrails will be incorporated into ANSI Standard A1264.4. The ANSI Z359 committee is reviewing the drafted ballusted guardrails ANSI Standard. The ANSI full committee meeting will convene on April 29, 2025, and continue through May 1, 2025.

Economic & Fiscal Impact

Pursuant to Government Code Section [11346.5](#), the rulemaking proposal must include the economic and fiscal impact of the proposed regulatory changes. The Standards Board will assess the economic and fiscal impact of the proposed changes to the General Industry Safety Orders, Article 2. The Chair will send a cost worksheet to advisory committee members.

Discussion

1. Review October 2024 Advisory Committee Post Text:

The committee reviewed the proposed text in bold, which were the consensus language from October 2024. If there were no comments, the proposed text was unbolded.

Section 3209 Standard Guardrails

2. Proposed section 3209(b) permits the guardrail system to have a height greater than 42-45 inches, provided the additional rails do not create an opening greater than 21 inches. This requirement becomes relevant when a sloped area must be guarded. The Chair shared photos to illustrate.

- a. Proposed Regulatory Text

§3209. Standard Guardrails ~~and Toeboards.~~ *[Toeboards will be relocated]*

~~(a) (b)~~ A standard guardrail shall consist of top rail, midrail or equivalent protection and posts and shall have a vertical height ~~within the range of 42 inches to 45 inches~~ from the upper surface of the top rail to the floor, platform, runway or ramp level walking-working surface. ~~(Note: the permissible tolerance in height dimensions is one inch). See Figure 3209-1. The top rail shall be smooth surfaced throughout the length of the railing. The midrail shall be approximately halfway between the top rail and the floor, platform, runway or ramp. The ends of the rails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard. (Title 24, Part 2, Section 2-1716(a)). [Smoothness of the rail is addressed in (d) and midrail is moved to (b)(1)]~~

EXCEPTION to subsection(b): The topmost vertical height of railings may exceed 42 if the opening between horizontal railings are no more than 21 inches apart.

[Consider suggestion to change 42 to 45]

Additional rails may be added above 45 inches provided that the space between the railing does not exceed 21 inches. Design must meet Standard Guardrail strength requirements.

Note that the text in blue was proposed by OSHSB and the text in red was proposed by committee members.

- b. Proposed Amendments

Greg Tinker, Tower Safety Services: Consider leaving “42 inches to 45 inches” in section 3209(b). In the proposed exception, consider “may exceed 45 inches”.

Matt Smylie, Ford Construction: Consider “a minimum of 42 inches, but it can be greater so long as intermediate rails do not allow for a space larger than 21 inches.”

Steve Johnson, Associated Roofing Contractors: Consider adopting the Federal range of 39 to 45 inches.

- c. Comments

Greg Tinker, Tower Safety Services: California Regulations, General and Construction Safety Orders, and federal regulations also have upper and lower limits. An upper limit should be included in the proposed regulations.

Steve Johnson, Associated Roofing Contractors: Many existing railings and buildings would be noncompliant if the regulation changes from 42 inches to 45 inches to strictly 42 inches. Federal regulations allow 39 inches to 45 inches. Amending the proposed text to 42 inches is restrictive. There is a disparity between the Federal range and the California range of guardrails, which consist of a top rail and mid rail. The proposed exception allows employers to have guardrails that exceed the current range.

Maryrose Chan, OSHSB: The proposed exception allows the employer to increase the vertical height. The California Building Code specifies that “guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 42 inches (1067 mm) in height as measured vertically above the adjacent walking surface or the line connecting the nosings. The proposed 39 to 41 inches language will not comply with the California Building Code Building requirements. Tower Services and Cal/OSHA and Spencer will provide the Board with suggested language to address the allowance of top rails higher than 42 inches to 45 inches within subsection 3209(b). The Board will review the suggested language.

Steve Johnson, Associated Roofing Contractors: Federal regulations allow 39 inches to 45 inches.

Maryrose Chan, OSHSB: Federal regulations for a guardrail height of less than 42 inches do not meet the California Building Code requirements. Forty-two (42) to Forty-Five 45 inches meets the California Building Code and Federal requirements.

Steve Johnson, Associated Roofing Contractors: A starting and stopping point for guardrails is needed. The proposed exception could invoke more violations.

Maryrose Chan, OSHSB: If a higher guardrail is allowed, including the upper limit is unnecessary.

Steve Johnson, Associated Roofing Contractors: Regulations should be direct. Including an exception for alternative top rail, heights are not beneficial and may invoke more citations for employers.

Maryrose Chan, OSHSB: The California Building Code is published every three years. The specific version of the California Building Code that applies to a building is determined by the date the building permit application is submitted to the Building Department. The code in effect on that date must be followed for that project.

Matt Smylie, Ford Construction: The range of 42 inches to 45 inches indicates the midrail is within the specified regulation. The range provides less than 21 spacing between the midrail, top rail, and bottom.

Micheal Donlon, MD Safety Service: The range of 42 inches to 45 inches allows industry to utilize rigid rails, such as wire. Taller guardrails are usually used on a slope. The proposed exception will permit taller guardrails when needed.

Larry McCune, Cal/OSHA: A higher guardrail height should be allowed when exterior building maintenance is not conducted.

Spencer Price, Cal/OSHA: Additional language is needed to address exterior building maintenance.

Greg Tinker, Tower Safety Services: The proposed exception will apply to all industries affected. Eliminating the existing range of 42 inches to 45 inches in subsection 3209(b) is not beneficial.

Greg Tinker, Tower Safety Services: Consider leaving “42 inches to 45 inches” in section 3209(b). In the proposed exception, consider “may exceed 45 inches”.

Matt Smylie, Ford Construction: Consider “a minimum of 42 inches, but it can be greater so long as intermediate rails do not allow for a space larger than 21 inches.”

Action Item:

1. The proposed Exception is different from the federal rule. Federal OSHA will review the proposed Exception during the formal rulemaking process.
2. Cal/OSHA, Tower Safety Services, and Associated Roofing Contractors will propose language for the Chair to consider.

Outcome: Proposed text after March 7, 2025, e-mail discussion:

(a) Wherever guardrail protection is required, the following standards shall be adhered to except that other types and arrangements of guardrail construction will be acceptable where the height, surface and end projection of the top rail complies with the standard specifications and the closure of the vertical area between the top rail and floor, platform, runway or ramp walking-working surface shall provides protection at least equivalent to that afforded by a mid-rail. [In addition, guardrails installed on buildings where façade access for exterior building maintenance or window cleaning involves workers or equipment passing over the guardrail, the guardrail shall comply with applicable subsections of §3294\(c\).](#)

~~(a) (b) A standard guardrail shall consist of top rail, midrail or equivalent protection, and posts, and shall have a vertical height within the range of 42 inches to 45 inches from the upper surface of the top rail to the floor, platform, runway, or ramp level walking-working surface. (Note: the permissible tolerance on height dimensions is one inch). See Figure 3209-1. The top rail shall be smooth-surfaced throughout the length of the railing. The midrail shall be approximately halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard. (Title 24, Part 2, Section 2-1716(a)).~~

EXCEPTION to the vertical height in subsection(b):
The topmost vertical height of guardrails that are not used with exterior building maintenance or window cleaning access may exceed 45-inches if the opening between horizontal railings do not exceed 21 inches.

Section 3210. Guardrails and Fall Protection at Elevated Locations.

3. **October 2024 Advisory Committee Follow-up Action Item:** Federal OSHA requested that OSHSB reevaluate all existing exceptions to section 3210. The Chair contacted representatives from the Association of California Water Agencies to gain the Agency's perspective regarding water flumes concerning the proposed regulations.

a. Proposed Regulatory Text

[PG&E Proposal]

Flumes when they are accessed by a **qualified** employee for the purpose of conducting a flume patrol (as defined in Section 3207), **provided the employee remains on the existing walkway while conducting the patrol. In addition, the employer shall implement additional written administrative procedures or provide feasible alternative means to control the fall hazard. Inspections performed from a structure's leading edge (side and under flume structure inspections) are prohibited without the use of conventional fall arrest/fall restraint/positioning systems.**

[Edison Proposal]

When flumes are accessed by an employee to conduct repairs or a flume patrol (as defined in Section 3207), and it is infeasible or impracticable to erect guardrails or don appropriate fall protection , then the employer must either:
Implement written administrative procedures; or
Provide alternative means (i.e., cable railings, handrails, handholds, etc.) that will control the hazard of falling from the flume.

For new installation or major renovation after [6 months after OAL effective date], flumes shall be designed and constructed to provide guardrails or other means of fall protection

b. Proposed Amendments

None

c. Comments

Maryrose Chan, OSHSB: Most flume related injuries originate from the public.

Michael Donlon, MD Safety Services: A limited number of individuals utilize flumes.

Maryrose Chan, OSHSB: The Chair has contacted the Association of California Water Agencies to gather further information regarding flume patrol.

Outcome: The Chair responded to questions regarding inquiries related to flumes. The proposed text will be modified. At the meeting, the Chair was going to add the proposed text regarding new installation of flumes to an appropriate section or subsection. However, after further consideration, proposed text regarding new installation will remain as part of the Exception.

Action Item: PG&E and Edison will meet to consolidate the proposed Exception. MD Safety Service will provide the Board with water organization contacts.

Post meeting, through e-mail communications (July 2025) with PG&E, Edison, IBEW, and Cal/OSHA, the proposed Exception is:

6. Flumes installed prior to [6 months after OAL effective] that when they are accessed by an a qualified person (as defined in section 3207) for the purpose of conducting a flume patrol (as defined in Ssection 3207) and, provided the employee remains on the existing walkway while conducting the patrol. In addition, the employer shall implements either other written administrative procedures or provides feasible alternative means which will to control minimize the fall hazard risk and hazard of an employee falling off the flume. For new installation or major renovation after [6 months plus one day after OAL effective date], flumes shall be designed and constructed to provide guardrails or other means of fall protection.

Section 3210.1 Personal Fall Protection Systems.

4. October 2024 Advisory Committee Follow-up Item Action Item: Class 2 Note added regarding Self-Retracting Device Definition

a. Proposed Regulatory Text

Class 2 self-retracting devices are intended for applications wherein overhead anchorages may not be available or feasible and which may, in practical application, be subjected to a free fall of no more than 6 feet over an edge.

b. Proposed Amendments

None

c. Comments

Maryrose Chan, OSHSB: The definition of self-retracting device differs from the federal standard. Class 2 ANSI Z359.14- 2021 will be added as a note.

Outcome: Class 2 ANSI Z359.14- 201 was added as the last sentence in the proposed Note.

Action Item: None

Section 3210.1 Personal Fall Protection Systems.

5. **October 2024 Advisory Committee Follow-up Item: EXCEPTION to (d)(1)(A)5. will remain.** An e-mail was sent to committee members on November 12, 2024, explaining the rational for leaving the Exception.

- a. Proposed Regulatory Text:

EXCEPTION: All personal fall arrest, personal fall restraint and positioning device systems that meet the applicable ANSI/ASSP Z359 edition in effect when the equipment was manufactured are deemed as meeting this subsection.

~~All personal fall arrest, personal fall restraint and positioning devices are deemed as meeting this section if they meet the applicable ANSI/ASSP Z359 edition in effect when the equipment was manufactured~~

Outcome: Affirmed

Section 3210.1 Personal Fall Protection Systems.

6. **October 2024 Advisory Committee Follow-up Action Item:** Draft language to address fall protection outside the user weight capacity scope of ANSI Z359 standards.

- a. Proposed Regulatory Text

For employees who are outside the user weight capacity range of ANSI/ASSP Z359, the employer shall provide and ensure employees use appropriately rated personal fall protection systems.

~~NOTE to (d)(A)6.: Note to subsection (d)(1)(A)6.: As of January 2025, ANSI/ASSP Z359 approved personal fall protection equipment designed to safely support a user with tools within a weight range of 110 to 310 pounds.~~

Note to subsection (d)(1)(A)6.: As of June 2023, the ANSI/ASSP Z359 Full Committee is updating standards such that approved personal fall protection equipment components are designed to safely support a user with tools within a weight range of 110 to 310 pounds.

Outcome: Note was accepted.

- b. Proposed Amendments
None

- c. Comments

Thomas Kramer, ANSI Z359 & LJB Inc: The ANSI Z359 Committee approved 110-310 pounds except full body harnesses because no energy absorber is involved.

Raymond Mann, 3M: Research shows that a weight of 110 pounds and below will take a harder hit in the field, which supports changing the weight capacity to 110-310 pounds.

Maryrose Chan, OSHSB: The proposed regulation requires employers to ensure that employees outside the user weight capacity range use appropriately rated personal fall protection systems. The previous version of the proposed Note was corrected.

Renaldo Edmonson, Marathon Petroleum: The proposed regulation should mention a competent person.

Maryrose Chan, OSHSB: The competent person represents the employer.

Outcome: Note concerning section 3210.1(d)(1)(6) in blue was affirmed.

Action Item: None

Section 3210.2. Falling Object Protection.

7. **October 2024 Advisory Committee Follow-up Action Item:** Relocation of toeboard requirements from section 3209 to 3210.2, and headings were added to reflect the content of the subsection

- a. Proposed Regulatory Text

§3210.2. Falling Object Protection. [Replaces §3273(e) & (f), §1910.28(c)]

(a) The employer shall protect employees where there is a hazard from falling objects by implementing one or more of the following: [Reorganized after adding toeboards to section 3210.2]

~~(1) Erecting toeboards, screens or paneling on guardrail systems to prevent objects from falling from higher levels. [Proposed to be deleted]~~

(1) Toeboards. [Relocated from section 3209(i)]

(A) Toeboards shall be erected along the exposed edge of the overhead walking-working surface for a length that is sufficient to protect employees below. [§1910.29(k)(1)(i)]

(B) Toeboards used for falling object protection shall be constructed of wood, concrete, metal or other suitable material. [portion of 3209(d)]

(C) The top of the toeboard shall be not less than 3.5 inches above the walking-working surface. [From subsection (d), §1910.29(k)(1)(ii)]

(D) Toeboards shall not have more than ¼ (0.25) inch clearance or opening above the walking-working surface. [From subsection 3209(d), §1910.29(k)(1)(iii)]

(E) Where constructed of metal grille, mesh shall not exceed 1 inch at its greatest dimension. [3209(e), 1910.29(k)(1)(iv)]

(F) Toeboards shall have a minimum height of 2.5 inches when used around vehicle repair, service or assembly pits. Toeboards may be omitted around

vehicle repair, service or assembly pits when the employer can demonstrate that a toeboard would prevent access to a vehicle that is over the pit.

[§1910.29 (k)(1)(v)]

(G) Toeboards shall be capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or outward direction at any point along the toeboard. *[§1910.29 (k)(1)(vi)]*

Note: Requirements on toeboards of powered platforms are located in section 3295.

(2) Screens or Paneling on Guardrail Systems

(A) Where tools, equipment or materials are piled higher than the top of the toeboard and pose a hazard of falling, paneling or screening shall be installed from the toeboard to the midrail of the guardrail system for a length that is sufficient to protect employees below. If the items are piled higher than the midrail, the employer also shall install paneling or screening from the midrail to the top rail for a length that is sufficient to protect employees below; and *[§1910.29(k)(2)(i)]*

(B) All openings of paneling or screens on guardrail systems shall be small enough not exceed 1-inch. *[§1910.29(k)(2)(ii)]*

(3) Erecting canopy structures.

(A) Canopies used for falling object protection shall be strong enough to prevent collapse and to prevent penetration by falling objects. *[§1910.28(c)(2), §1910.29(k)(3) §3273(e)(2)]*

(4) Physical barriers not limited to, fencing, barricades or other equivalent means or methods to prevent entry into the area to which objects could fall or prohibit employees from entering the barricaded area. *[§1910.28(c)(3), 3273(e)(1)(C)]*

(5) Limiting the size of opening. Where the type of process or operation, exclusive of repair and maintenance, is such that there are hazards to employees from materials falling through platform or runway openings, the openings shall be limited to a size that prevents materials falling through the openings. *[§3273(e)(1)(C)(2)]*

(6) Safety nets in accordance with section 3210.4. (D) Where platform or runway gratings are used as work areas during repair or maintenance, there shall be provided at such areas suitable safeguards to prevent tools or materials falling on employees below. Such safeguards may be netting suspended below the work area, canvas, planking on the surface of the grating or barricaded or sheltered areas below the work area. *[Deleted text §3273(e)(1)(C)(3) and replaced by (a)(6)]*

b. Proposed Amendments
None

c. Comments

Maryrose Chan, OSHSB: The previously discussed proposed text regarding toeboards was relocated from section 3209 to 3210.2. Headings to subsections were added.

Outcome: Relocations and headings affirmed.

Action Item: None

Section 3210.3. Fall Protection Training Requirements.

8. **October 2024 Advisory Committee Follow-up Action Item:** Add a Note referencing additional training topics required in other Articles

- a. Proposed Regulatory Text

§3210.3. Fall Protection Training Requirements. [§1910.30]

NOTE: Training Requirements for Controlled Descent Apparatus is specified in section 3286. Training Requirements for Rope Access Equipment is specified in section 3270.1.

- b. Proposed Amendments

None

- c. Comments

Maryrose Chan, OSHSB: Training topics for competent persons are separated from user training in the proposed regulations.

Outcome: Proposed language affirmed.

Action Item: None

Section 3212. [Fall Protection or Fall Hazards at](#) Floor Openings, ~~Floor Holes~~, Skylights and Roofs.

9. **October 2024 Advisory Committee Follow-up Action Item:** Amend Section 3212 Title to reflect the content of the section

- a. Proposed Regulatory Text

Section 3212. [Fall Protection or Fall Hazards at](#) Floor Openings, ~~Floor Holes~~, Skylights and Roofs.

- b. Proposed Amendments

Greg Tinker, Tower Safety Services: Strike “or Fall Hazards at”.

Ford Construction, MD Safety Service: Consider “Floor Openings, Skylights and Roofs. (Agreement from Tower Safety Services)

- c. Comments

Greg Tinker, Tower Safety Services: Removing “or Fall Hazards at” within the section’s title creates a direct title for the supporting text.

Outcome: Leave the title unchanged

Action Item: None

10. October 2024 Advisory Committee Follow-up Action Item: Review the proposed definition pertaining to residential roof.

a. Proposed Regulatory Text

EXCEPTION to (f)(1): On roofs of buildings originally constructed as residential roofs where the employer can demonstrate that guardrail requirements, personal fall protection, covers, or safety net systems are infeasible or creates a greater hazard, the employer shall develop and implement a fall protection plan in accordance with section 1671.1 and section 3210.3.

Residential roof. For the purposes of these orders, a residential roof is the roof of a detached structure not more than three stories in height that can or was originally constructed as 1-4 dwelling units. [Note: definition was from HSC-relocate this definition to section 3207]

b. Proposed Amendments

Kevin Bland, Ogletree, Deakins, Nash, Smoak & Stuart, P.C.: Consider “originally constructed 1-4 dwelling units”. (Agreement from MD Safety Orders)

c. Comments

Spencer Price, Cal/OSHA: The definition of residential roofing should remain in section 3212.

Michael Donlon, MD Safety Service: Families should not be referenced.

Larry McCune, Cal/OSHA: The proposed text's definition originates from the Health and Safety Code.

Action Item: The definition of residential roofing will not be relocated to section 3207.

Outcome: After further consideration, the definition of residential roofing will remain in section 3212.

Action item: None

Section 3212. Fall Protection or Fall Hazards at Floor Openings, Floor Holes, Skylights and Roofs.

11. October 2024 Advisory Committee Follow-up Action Item: Review the revised definition for Floor Opening.

a. Proposed Regulatory Text

Floor Opening. An opening in any floor or platform, ~~at least~~ 2 inches or more in the least horizontal dimension. It includes stairway floor openings, ladderway floor openings, hatchways and chute floor openings. *[§1910.21(b), Used in §3212, defined in §3207]*

b. Proposed Amendments

None

c. Comments

Maryrose Chan, OSHSB: Federal regulations define opening as “a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface at least 2 inches (5 cm) in its least dimension”. Federal regulations identify “holes” as horizontal on the floor, while “openings” are vertical, like wall openings. This differs from California standards. To be as effective as the Federal standard, the definition of floor opening was amended from 12 inches to 2 inches.

Kevin Bland, Ogletree, Deakins, Nash, Smoak & Stuart, P.C.: Consider defining “Fall through”. Consider having a separate subsection for tripping hazards.

Greg Tinker, Tower Safety Services: The hazard will be covered for a two-inch floor opening. The regulation states, “A cover will guard the roof opening, so a guardrail would not be placed around the hazard.”

Matt Smylie, Ford Construction: Reducing the requirement from 12 to 2 inches presents an issue for drive-over hoppers. The opening for drive-over hoppers is approximately 11 inches. The opening cannot be barred. The worker must drive over the opening and drop the material. This will affect the general industry.

Maryrose Chan, OSHSB: Federal intent was also to prevent tripping hazards in public spaces such as restaurants and offices. The Federal standard was written in order to avoid accidents related to “holes”.

Paul Anderson: The language change will make the work of construction workers more difficult. On construction sites, when workers complete the installation for residential plumbing requiring a 6 to 8-inch hole, a cover would have to be placed over the opening. The opening is close to the wall and will not create a high-risk hazard.

Maryrose Chan, OSHSB: Article 2 regulations are for general industry.

Kevin Bland, Ogletree, Deakins, Nash, Smoak & Stuart, P.C: Article 2 regulations are centered on general safety orders. However, General safety orders are applied

to construction when standards are not specific. An exception for construction will be beneficial to avoid citations.

Mike Donlon, MD Safety Service: The standard currently differentiates between floor openings and floor holes. Floor openings are 12 inches, and floor holes are less than 12 inches. Fall protection requirements are specific to floor openings. The criteria for floor holes are centered on tools, materials, and individuals falling through.

Spencer, Price, Cal OSHA: To mitigate the issue, consider adding language from “Article 19, section 1632, Floor, Roof, and Wall Openings to be Guarded.”

Kevin Bland, Ogletree, Deakins, Nash, Smoak & Stuart, P.C.: The text is unclear. Tripping hazards and fall protection are intertwined as one section.

Outcome: The text will be amended.

Action Item: The Chair will amend the proposed text to retain the floor opening to 12 inches. The Chair will review the proposal to ensure that the concerns for floor holes less than 12 inches will be addressed.

Section 3212. Floor Openings, ~~Floor Holes~~, Skylights and Roofs.

- 12. Review New Proposed Text:** The committee discussed the effects of the proposed definition of opening within section 3212 and reviewed the proposed changes to the entire section. The section was reorganized. The proposed regulatory text listed in the succeeding item numbers received comments. Subsections not mentioned received no comments and were affirmed.

a. Proposed Regulatory Text

(c) Hatchways and Chutes. Each employee shall be protected from falling through a hatchway and chute floor opening (12 inches) by: [1910.28(b)(3)(v)]

(1) A hinged floor opening cover and a fixed guardrail system that leaves only one exposed side. When the hole is not in use, the employer shall ensure the cover is closed or a removable guardrail system is provided on the exposed sides; [1910.28(b)(3)(v)(A)]

(2) A removable guardrail system and toeboards on not more than two sides of the hole and a fixed guardrail system on all other exposed sides. The employer shall ensure the removable guardrail system is kept in place when the opening is not in use; or [1910.28(b)(3)(v)(B)]

(3) A guardrail system or a travel restraint system when a work operation necessitates passing material through a hatchway or chute floor opening. [1910.28(b)(3)(v)(C)]

b. Proposed Amendments

Maryrose Chan, OSHSB: Consider using “fall restraint” instead of “travel restraint.”

c. Comments

Matt Smylie, Ford Construction: The 12 inches within (c) is centered around access to small spaces.

Michael Donlon, MD Safety Service: “Travel restraint” is not commonly used.

Spencer, Cal/OSHA: “Travel restraint” is specific to the telecommunication industry.

Raymond Mann, 3M: “Travel restraint” should be defined. Federal standard 1910.140(c)(14) clarified that the anchorage point for restraint shall be 5,000 pounds. ANSI's prior requirement was 1,000 pounds for positioning 30,000 pounds or a 2:1 safety factor. There is confusion present in the industry.

Thomas Kramer: ANSI Z359 standards for fall protection states “that restraint anchorages (like those used in travel restraint systems) must withstand a static load of 1,000 lbs., or two times the foreseeable force if certified.”

Michael Donlon, MD Safety Services: The proposed regulations should incorporate language from 1910.140(b) to define “travel restraint systems.”

Outcome: The text will be amended consistently with proposed Section 3210.1.

Action Item: The Chair will consider “fall restraint” instead of “travel restraint.” The proposed text will incorporate established language from Federal Standard 1910.14(c).

Section 3212 Floor Openings, Floor Holes, Skylights, and Roofs

13. Review New Proposed Text: section 3212(g)(2)(D) regarding burglar bars as a fall protection system

a. Proposed Regulatory Text

(D) The screen construction shall be of grillwork, with openings less than **42 6** inches in the least horizontal dimension.

b. Proposed Amendments

Kevin Bland, Ogletree, Deakins, Nash, Smoak & Stuart, P.C.: Consider adding an installation date.

c. Comments

Maryrose Chan, OSHSB: The prior 12-inch requirement for burglar bars was amended to 6 inches to be consistent with skylight nets.

Unidentified Committee Member: Nets and bars would be a different construct.

Maryrose Chan, OSHSB: The inches reference guarding the opening with burglar bars as a fall protection system. Six inches is plausible with existing netting and screens.

Mike Donlon, MD Safety Service: Under General Industry Safety Order section 3202, a grandfather status due to building codes may be allowed.

Kevin Bland, Ogletree, Deakins, Nash, Smoak & Stuart, P.C.: The design of the burglar bars is not a building code issue but a manufacturing dilemma.

Outcome: The proposed language will be amended.

Action Item: The Chair will consider a grandfather date for existing burglar bars.

Section 3212 Floor Openings, Floor Holes, Skylights, and Roofs

14. Review New Proposed Text: section 3212 subsection (h) Glazed Surfaces.

a. Proposed Regulatory Text

(f)(h) Glazed Surfaces.

(1) Glazed surfaces installed [OAL effective date] shall bear the manufacturer's mark designating the type and thickness of the glass or glazing material. The identification shall not be omitted unless approved and an affidavit is furnished by the glazing contractor certifying that each light is glazed in accordance with approved construction documents that comply with Title 24, Chapter 24. Safety glazing shall be identified in accordance to title 24, section 2406 Safety Glazing.

Each pane of tempered glass, except tempered spandrel glass, shall be permanently identified by the manufacturer. The identification mark shall be acid etched, sand blasted, ceramic laser etched, embossed or a type that once applied, cannot be removed without being destroyed.

Exception: Tempered spandrel glass is permitted to be identified by the manufacturer with a removable paper designation.

Note: Source: Title 24, California Building Code, Chapter 24 Glass and Glazing, Section 2403 General Requirements For Glass.

(2) Access shall not be permitted on glazed surfaces such as roofs, vaults, canopies or skylights glazed with transparent or translucent materials unless an engineer currently registered in the State of California and experienced in the design of such glazed structures has certified that the surface will support all anticipated loads. Employees working on such surfaces shall be protected by a fall protection system meeting the requirements of ~~Section 1670 of the Construction Safety Orders.~~ Section 3210.1.

(g) (3) When glazed surfaces cannot be safely accessed for maintenance in accordance with subsection (f)(h)(2), scaffolds, catwalks, rolling ladders, platforms or other methods of safe access shall be provided.

b. Proposed Amendments

None

c. Comments

Maryrose Chan, OSHSB: Section 3212 (h)(1) comes directly from Title 24, California Building Code, Chapter 24 Glass and Glazing, Section 2403 General Requirements for Glass.

Yancy Yap, Cal/OSHA: The existing language mentions “the ability of the surface to bear the load,” but the new language does not. The way the proposed text is written indicates the glazed surface may be for a window.

Maryrose Chan, OSHSB: Section 3212 (h)(1) was an addition to the proposed text but originates directly from the California Building Code. Section 3212(h)(2) contains existing (h)(1).

Outcome: The proposed language was affirmed.

Action Item: None

Section 3213. Service Pits and Yard Surface Openings.

15. Review New Proposed Text: Antiquated Title 24 references were deleted, and the term permanent in subsection(b) was struck out.

a. Proposed Regulatory Text

(d) Manhole covers and their supports, when located in plant roadways, shall comply with local standard highway requirements if any; otherwise, they shall be designed to carry a truck rear-axle load of at least 20,000 pounds.

b. Proposed Amendments

None

c. Comments

Larry McCune, Cal/OSHA: Subsection (d) is limited to roadways.

Outcome: The proposed language was amended and affirmed at the committee meeting.

Action Item: None

Section 3214 Stair Railings and Handrails.

16. Review New Proposed Text: section 3214 was reviewed, and the use of handrails for exterior stairs was discussed. Subsections not mentioned received no comments and were affirmed.

a. Proposed Regulatory Text

| <u>Stair width</u> | <u>Enclosed</u> | <u>One open side</u> | <u>Two open sides</u> | <u>With earth built up on both sides</u> |
|---|--------------------------------|----------------------|-----------------------|--|
| <u>Exterior stairs less than 44 inches.</u> | <i>[See subsection (c)(4)]</i> | | | <u>One handrail on least one side.</u> |
| <p>Note to table: The width of the stair must be clear of all obstructions except handrails. <i>[Moved to (a)(1)] - What type of exterior stairs to exclude, rock, dirt, Not in an industrial setting...Health and Safety Code- non-traditional stairs</i> <i>Monumental stairs and grand stairs-NFPA 101</i></p> | | | | |

b. Proposed Amendments

Kevin Bland, Ogletree, Deakins, Nash, Smoak& Stuart, P.C.: Consider exempting outdoor decorative stairs.

Kevin Bland, Ogletree, Deakins, Nash, Smoak& Stuart, P.C.: Consider the following language, “excluding stairs constructed out of natural material such as rock, dirt, and unfinished wood.”

c. Comments

Maryrose Chan, OSHSB: Table 3214-1 is from the federal standard §1910.28. The last portion of the table is stricken. It is unclear whether handrails should be required for exterior stairs.

Raymond Mann,3M: Consider referencing the building code if applicable.

Thomas Kramer, LJB Inc: Consider an exception for exterior stairs primarily for public use.

Kevin Bland, Ogletree, Deakins, Nash, Smoak& Stuart, P.C.: The Board’s jurisdiction is not public use.

Paul Anderson, OSHA Compliance Services: The California Building Code specifies requirements for risers and treads in stairways. The pictures shown do not meet the criteria.

Matt Smylie, Ford Construction: Consider incorporating the definition of industrial stairs instead of drafting an exclusion for exterior stairs. California Code of

Regulation defines industrial stairs as “a series of steps leading from one level or floor to another, or to platforms, pits, boiler rooms, crossovers, or around machinery, tanks, and other equipment. Specifically, a series of steps and landings with three or more risers constitutes an industrial stair.”

Michael Donlon, MD Safety Service: Referring to the stairs as industrial stairs does not resolve the issue. Industrial stairs require guardrails and handrails.

Outcome: The table will be amended.

Action Item: The Chair will research the Health and Safety Code- non-traditional stairs, monumental stairs, and grand stairs-NFPA 101 and propose an amendment to the Table.

Section 3214. Stair Railings and Handrails.

17. Review New Proposed Text: section 3214

- a. Proposed Regulatory Text
(b) Stair rails. A stair railing shall be of construction similar to a guardrail (see Ssection 3209) but the vertical height shall be in compliance with subsection 3214(c). Stair railings on open sides that are 30 inches or more above the surface below shall be equipped with midrails approximately one half way between the steps and the top rail.

(1) Stair rails shall not have openings that exceed 19 inches at its least dimension where there is an open side of 30 inches or more above the surface below.
[§1910.29(f)(4)]

- b. Proposed Amendments
Kevin Bland, Ogletree, Deakins, Nash, Smoak& Stuart, P.C.: Add “where there is an open side of 30 inches or more above the surface below” to (b)(1).

- c. Comments
No comments on the rest of the section 3214

Outcome: The proposed amendment was accepted, and the text was amended.

Action Item: Address subsection(c)(4) after Table 3214-1 is finalized

Section 3231.Stairways.

18.Review New Proposed Text: section 3231. No comments except for what is listed below.

- a. Proposed Regulatory Text
(3) Stairways stairs shall be installed at angles of between 30 and 50 degrees from horizontal (see Figure 3231-1). [1910.25(c)(1)]

b. Proposed Amendments

Raymond Mann, 3M: The pictures previously shown were not at angles between 30 and 50 degrees.

c. Comments

None

Outcome: The proposed text was affirmed.

Action Item: None

Section 3234 Fixed Industrial Stairs.

19. Review New Proposed Text: Entire section was reviewed. Subsections not mentioned received no comments and were affirmed.

a. Proposed Regulatory Text

(c) Stair Strength. Fixed stairways shall be designed and constructed to carry a load of 5 times the normal live load anticipated but never of less strength than to carry safely a moving concentrated load of 1,000 pounds. ~~(Title 24, Part 2, Section 2-3326(-). [1910.25(b)(6)] –~~

b. Proposed Amendments

Renaldo Edmonson, Marathon Petroleum: Leave the proposed text as written. (Agreement from MD Safety Service)

c. Comments

Maryrose Chan, OSHSB: The Chair consulted with the committee about the different stair strength criteria: ANSI MH32.1-2018, Stairs ladders, and Open-Edge Guards for Use with Material Handling Structures and ANSI A1264-1-2017, Safety Requirements for Workplace Walking/Working Surfaces And Their Access; Workplace, Floor, Wall And Roof Openings; Stairs And Guardrail/Handrail Systems.

Michael Donlon, MD Safety Service: Using either of the ANSI Standards listed requires *the employer to prove to the* inspector what the regulation specifies. Documenting every stairway would be cumbersome and possibly unreasonable.

Outcome: Text will remain as written.

Action Item: None

Section 3242. Glass and Glazing.

20. Review New Proposed Text: section 3214(b)(1)

a. Proposed Regulatory Text

§3242. Glass and Glazing.

(a) General. Specifications and requirements for glass and glazing installed before March 13, 1999, shall meet the requirements of Chapter 54 of the 1982 Uniform Building Code.

(b) Specifications and requirements for glass and glazing installed on or after March 13, 1999, shall meet the requirements of Chapter 24 of the 1997 Uniform Building Code which is hereby incorporated by reference.

(c) Specifications and requirements for glass and glazing installed on or after [OAL effective date] shall be in accordance with, title 24, part 2 California Building Code, chapter 24 Glass and Glazing.

b. Proposed Amendments

None

c. Comments

Maryrose Chan, OSHSB: Subsection(c) was added.

Outcome: The proposed text was affirmed.

Action Item: None

Closing Remarks

Maryrose Chan, OSHSB

The sixth advisory committee meeting concluded the proposed changes to Article 2 of the General Industry Safety Orders. Following the sixth advisory committee, the Standards Board will initiate the formal rulemaking process.

Simone Sumeshwar, Senior Safety Engineer, will chair the advisory committee for Walking-Working Surfaces, Article 4 Rulemaking.

Michael Nelmidia, Senior Safety Engineer will chair the advisory committee for Articles 5 through 6.

The Board appreciates your participation in Article 2 Walking Working Surfaces rulemaking process.