



Memorandum

To: Christina Shupe, Executive Officer
Occupational Safety and Health Standards Board

Date: December 17, 2018

From: Juliann Sum, Chief 
Eric Berg, Deputy Chief
Division of Occupational Safety and Health

Subject: Evaluation of Petition No. 570 to Amend title 8 section 1710

1.0 INTRODUCTION AND BACKGROUND

On August 14, 2018, the Division of Occupational Safety and Health (Cal/OSHA) received a petition from Don Zampa of the District Council of Iron Workers of the State of California and Greg McClelland of the Western Steel Council (petitioners). The petitioners request several changes to title 8, division 1, chapter 4, subchapter 4 (Construction Safety Orders), article 29, section 1710, Structural Steel Erection, including new allowances for a cone and bar barricade (CBB) warning system around the perimeter of floor openings. The CBB system would be used in lieu of temporary railings or coverings required by Construction Safety Orders, article 19, section 1632, Floor, Roof, and Wall Openings to Be Guarded.

2.0 PETITIONER'S REQUEST

The petitioner requests changes and additions to subsections 1710(b) and 1710(l). The recommendations include new definitions, changes to decking installation requirements, changes to fall protection requirements, and the use of CBBs around floor openings.

The CBB system recommended by the petitioners consists of high-visibility traffic high cones with connecting solid bars made of plastic or other similar material. The CBB system would be used only to warn employees about the presence of floor openings and does not create a physical barrier capable of withstanding any significant force. The pictures below show the CBB system.



Picture 1: Bar and cone barrier system in use



Picture 2: Connecting bar used between cones



Picture 3: Traffic cones with connecting bar

3.0 PROPOSED AMENDMENTS TO SECTION 1710

The changes proposed by the petitioner are shown below in underline-strikeout format. The CBB system is described in proposed subsection 1710(l)(8)(D) and 1710(l)(8)(E).

Subchapter 4. Construction Safety Orders
Article 29. Erection and Construction
§1710. Structural Steel Erection.

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(b) Definitions.

“Access opening” means any floor opening necessary to allow access to an incomplete level via ladders, stairs, scaffolds or other temporary means of access.

“Cone and bar barricade” or “(CBB)” means the structure described in subsection (1)(8) to prevent employees from moving too close to an access opening to be safe from stepping into it or falling through it.

* * * * *

(1) Temporary Flooring - Skeleton Steel Construction in Multistory Buildings.

(1) The derrick or erection floor shall be solidly planked or decked except for access openings. ~~Planking ϕ and decking shall be of-~~ equivalent sufficient strength, shall be of proper thickness to carry the working load and shall, at minimum have strength equivalent to “structural plank” as defined under “lumber” in section 1504. Planking shall be not less than 2 inches thick full size undressed, and shall be laid tight. Both planking and decking shall be secured as soon as practicable.

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(3) The exposed edges of all temporary planked and metal decked floors at the periphery of the building, or at interior openings, such as stairways and elevator shafts shall be protected by a single 3/8-inch minimum diameter wire rope of 13,500 pounds minimum breaking strength located between 42 and 45 inches above design finish floor height, unless a fall protection system is being used and that system is engineered by a registered, California State Structural Engineer. ~~Other~~ Guardrail protection may be used if equal fall protection is provided.

Note: If periphery fall protection is intended to be used as a catenary line, it shall meet the provisions of Section ~~1710(m)(4)~~ 1670.

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(4) Midrail protection.

(A) Midrail protection shall be installed: ~~as soon as the metal decking has been installed; and~~

(i) as soon as metal decking installation is complete and the floor is ready for turnover to and acceptance of custody by the controlling contractor; and

~~(B) Shall be installed~~ (ii) prior to the decked area being used by trades other than the steel erector or decking crew.

(B) The deck shall be deemed complete when the erector has established that the entire decking process for a specific elevation or floor is finished and has been inspected by the inspector or record or other inspecting agent.

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(5) Installation of Metal Decking

(A) Except as provided in Section 1710(n), metal decking shall be laid tightly and ~~immediately~~ secured upon placement as soon as practicable to prevent accidental movement or displacement.

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(6) A Metal decking holes and or openings shall not be cut until immediately prior to being permanently filled with the equipment or structure for which the hole or opening is needed or intended to fulfill its specific use and which meets the strength requirements of Section 1632(b) of these orders, or the hole or opening shall be immediately covered.

* * * * *

(8) A cone and bar barricade (CBB) may be utilized to protect workers from approaching to within unsafe distances from access opening when all the following conditions apply:

(A) solidly planked or erection floor is not practical during erection activities, but not limited to:

(i) Hoisting;

(ii) Connecting;

(iii) Welding;

(iv) Bolting;

(v) Rigging structural steel, steel joist and metal buildings;

(vi) Installing decking, siding, miscellaneous metals, ornamental iron, or similar materials;

(vii) Conducting inspections; or

(viii) Moving from point-to point to perform these activities;

(B) At all times while the CBB is present, entry onto the work on the floor is kept under the exclusive control of steel erector(s) and no other trades are allowed onto the floor.

(C) The CBB is maintained around all access opening borders and erected not less than six (6) feet or more than ten (10) feet from every access opening border.

(D) The CBB consists of vertical, bright green warning/support cones, with a minimum height of 28", stating with black lettering on both sides: "DANGER ACCESS OPENING."

(E) The warning/support cones are firmly connected to each other by solid or plastic rod, or a similarly rigid and substantial connecting medium.

Note: The purpose of the CBB is not to create a physically impenetrable barrier, but to provide a substantial and unmistakable visual warning, coupled with physical resistance, to indicate that entry into a hazardous area will occur if the barrier is breached.

(F) The employer provides and documents training, by a qualified person working on a floor or working level where a CBB has been established on the requirements of subsection (A) through (E) above.

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4.0 APPLICABLE TITLE 8 REGULATIONS

The CBB system is currently allowed by title 8 subsection 1635(c) for work in progress that requires floor openings to be uncovered.

Subchapter 4. Construction Safety Orders

Article 29. Erection and Construction

§1635. Floors, Walls and Structural Steel Framed Buildings.

* * * * *

(c) Special Provisions Applicable to Floor Openings. Section 1632(b) applies to floor openings at locations where steel erection work is taking place. This subsection applies where work is in progress that requires floor openings to be uncovered. For such work, all of the following requirements shall apply:

(1) The floor or working level where such work is in progress shall be under the exclusive control of the steel erection employer and shall be barricaded to prohibit entry by unauthorized personnel.

(2) The floor area adjacent to the floor opening shall be barricaded or the floor opening shall be covered when not attended by steel erection personnel.

(3) All planking and other materials used to cover floor openings shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time. The cover shall have not less than 12 inches of bearing on the surrounding structure.

(4) All floor opening covers shall bear a sign stating, "OPENING-DO NOT REMOVE", in 2 inch high, black bold letters on a yellow background.

(5) The placement of covers shall be verified by a qualified person prior to each shift and following strong wind conditions.

(6) Workers shall be instructed and required to adhere to the following:

(A) Keep covers in place when not engaged in work requiring the opening to be uncovered, and

(B) Never remove a cover by walking forward or by stepping into an area where they cannot directly observe the surface their feet will touch.

(7) After work requiring floor openings to be uncovered has been completed and prior to allowing other trades in the work area, the guarding and covers for floor openings shall meet the provisions of Section 1632(b).

For work covered by subsection 1635(c), subsection 1635(c)(2) allows floor openings to be “barricaded” in lieu of covering the floor openings. The CBB system is an acceptable barricade under subsection 1635 because a barricade is not required to physically prevent passage of employees, but only deter passage according to both the Occupational Safety and Health Standards Board (the Board) and federal OSHA.

The Board explained what was meant by “barricaded” in the Final Statement of Reasons for section 1635(c)¹:

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Comment No. 3:

Ms. Lahargoue, on behalf of CEA, indicated that although proposed Section 1635(c)(2) includes a requirement that the floor area be barricaded, there is no definition of barricade in Section 1504. Therefore, the regulated community must interpret the requirements. She asked if the current practice of using caution tape or even red danger tape serve as a sufficient “barricade?”

Response:

While the term “barricade” is not defined in CSO, Section 1504, Definitions, it is used in other Title 8 construction standards without confusion. For example, in Section 1541 regarding excavation, subsection (l)(2), in part, states that, “Adequate barrier physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered.” In common usage, the dictionary definition for the term “barricade” means to obstruct, block or limit passage. **Caution or red danger tape would be a sufficient barricade** [emphasis added]. Therefore, the Board does not believe modification to the proposal is necessary as a result of this comment.

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¹ Final Statement Of Reasons. California Code Of Regulations Title 8: Chapter 4, Subchapter 4, Article 20, Section 1635(b) and New Section 1635(c) of the Construction Safety Orders. Available at: <https://www.dir.ca.gov/oshsb/flooropeningsteel0.html>

The CBB system is a more protective barricade than caution or red tape (permitted by the Board for subsection 1635(c)(2)) since the CBB system is stiffer and heavier than tape.

The explanation of barricade provided by the Board above is consistent with the following federal OSHA definition of barricade, in that a barricade deters passage, but is not required to prevent passage:

29 CFR Part 1926. Safety and Health Regulations for Construction
Subpart G: Signs, Signals, and Barricades
1926.203 Definitions applicable to this subpart

§1926.203(a) **Barricade** means an obstruction to deter the passage of persons or vehicles.

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5.0 APPLICABLE CALIFORNIA LABOR CODE SECTIONS

The California Labor Code contains specific requirements for the construction of steel framed buildings within Article 4 Structural Steel Framed Buildings. The sections applicable to this petition are listed below and include requirements for adequate strength and installation of temporary floors and the guarding of openings created by the removal of floor planks.

CALIFORNIA LABOR CODE
DIVISION 5. SAFETY IN EMPLOYMENT
PART 3. SAFETY ON BUILDINGS
CHAPTER 1. Buildings Under Construction or Repair
ARTICLE 4. Structural Steel Framed Buildings

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§7252. The derrick or working floor of every building shall be solidly decked over its entire surface except for access openings.

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§7254. Temporary floors shall be wood planking of proper thickness, grade and span to carry the working load, but shall not be less than two inches thick, full size undressed.

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7257. Wire mesh or plywood (exterior grade) shall be used to cover openings adjacent to columns where planks do not fit tightly.

§7258. Metal decking where used in lieu of wood planking shall be of equivalent strength and shall be laid tightly and secured to prevent movement.

§7259. Floor planks that are temporarily removed for any reason whatsoever shall be replaced as soon as work requiring their removal is completed or the open area shall be properly guarded.

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§7266. No person shall proceed with any work assigned to or undertaken by him, or require or permit any other person to proceed with work assigned to or undertaken by either, unless the planking or nets required by this article are in place. Violation of this section is a misdemeanor.

§7267. The Division of Occupational Safety and Health shall enforce this article.

6.0 APPLICABLE FEDERAL OSHA REGULATIONS

Federal OSHA regulations specific to steel erection are found in 29 CFR Part 1926 Subpart R of the Construction Safety Orders. The sections applicable to this petition are as follows.

29 CFR Part 1926. Safety and Health Regulations for Construction
Subpart R. Steel Erection

§1926.754 Structural Steel Assembly.

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1926.754(e) Metal decking.

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1926.754(e)(2) Roof and floor holes and openings.

Metal decking at roof and floor holes and openings shall be installed as follows:

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1926.754(e)(2)(ii) Roof and floor holes and openings shall be decked over. Where large size, configuration or other structural design does not allow openings to be decked over (such as elevator shafts, stair wells, etc.) employees shall be protected in accordance with § 1926.760(a)(1).

1926.754(e)(2)(iii) Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed or intended to fulfill its specific use and which meets the strength requirements of paragraph (e)(3) of this section, or shall be immediately covered.

1926.754(e)(3)Covering roof and floor openings.

1926.754(e)(3)(i) Covers for roof and floor openings shall be capable of supporting, without failure, twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time.

1926.754(e)(3)(ii) All covers shall be secured when installed to prevent accidental displacement by the wind, equipment or employees.

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1926.754(e)(5) Installation of Metal Decking

1926.754(e)(5)(i) Installation of metal decking.

Except as provided in § 1926.760(c), metal decking shall be laid tightly and immediately secured upon placement to prevent accidental movement or displacement.

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§1926.760 Fall Protection

1926.760(a)(1) Except as provided by paragraph (a)(3) of this section, each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

1926.760(a)(2) Perimeter safety cables. On multi-story structures, perimeter safety cables shall be installed at the final interior and exterior perimeters of the floors as soon as the metal decking has been installed.

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1926.760(d) Criteria for fall protection equipment.

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1926.760(d)(3) Perimeter safety cables shall meet the criteria for guardrail systems in § 1926.502 (see Appendix G).

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7.0 APPLICABLE CONSENSUS STANDARDS

The American National Standards Institute and the American Society of Safety Professionals address the hazards of steel erection in ANSI/ASSP A10.13. (R2017) Safety Requirements for Steel Erection. Specific requirements for the installation of temporary floors are included in section 10 of the 2011 edition of this standard. The sections applicable to this petition request are as follows.

ANSI/ASSP A10.13-2011 (R2017) Safety Requirements for Steel Erection

10. METAL DECK AND TEMPORARY FLOORING

10.1 The working floor of every multistory building or structure shall be solidly planked or decked over its entire surface except for access openings.

10.2 The following additional requirements shall apply for multi-story structures:

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10.2.4 The metal deck shall be placed tight and secured to prevent movement by wind as required, but no more than a maximum of 3,000 square feet (280m²) are placed. The deck shall be finally secured soon after, but no more than 90,000 square feet (8,361 m²) are placed.

10.3 A perimeter safety cable of 1/2-inch (12.7mm) wire rope or the equivalent shall be installed around the periphery of all temporary planked or metal-decked floors.

10.3.1 The perimeter safety cable shall be attached to all perimeter columns and kept 42 inches +/- 3 inches (106.7cm +/- 7.6cm) from the floor by the use of a turnbuckle or other means. The safety cable shall be left in place until it is replaced by walls, standard guardrails or other means of protection or until the working floor is removed. The cable is to be designed to resist 200 pounds (91kg) in any direction.

10.3.2 If the perimeter safety cable is to be used as a lifeline, then it shall meet the performance requirements of a horizontal lifeline.

10.4 Wood planking used for temporary flooring shall be of proper thickness to carry the intended load with a minimum working load of 50 pounds per square foot (244.1kg per m²). The wood planking shall be a minimum of 2 inches thick (50.8mm), full size, undressed, or the equivalent of laminated boards, or other material.

10.4.1 Planking shall be laid tightly and shall be secured to prevent movement.

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10.7 All temporary flooring shall be secured to prevent displacement by wind or other forces.

10.8 All temporary or permanent floor openings shall be completely planked over or barricaded until such time as they are used.

10.9 Employees required to work within 6 feet (1.8m) adjacent to any unguarded floor opening shall be protected by wearing safety harnesses with lanyards secured to a lifeline or other substantial anchorage or by other equivalent fall protection systems.

10.10 Floor planks or other coverings that are temporarily removed to perform work shall be replaced as soon as possible.

10.11 Decking holes and openings shall not be cut until it becomes essential to the construction process, and openings shall be immediately protected.

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8.0 HAZARDS TO EMPLOYEES WORKING ON AND AROUND TEMPORARY FLOORING OF SKELETON STEEL CONSTRUCTION IN MULTISTORY BUILDINGS.

Falls through openings is a significant hazard to employees installing temporary flooring during structural steel erection. There is a realistic possibility of death or serious physical harm resulting from these falls. In addition to death, potential injuries to employees include:

1. Concussions
2. Fractures
3. Crushing Injuries
4. Contusions
5. Lacerations
6. Avulsions
7. Abrasions

9.0 PETITIONER'S BASIS FOR AMENDMENTS TO REGULATION

The CBB system, according to the petitioner, has been thoroughly tested through years of experience and is supported by an extensive history of worker hours during structural steel erection that demonstrate the safety of the system. No supporting data, however, such as total worker-hours of use or number of projects where the CBB system has been used, were provided to support the petition.

The petitioner also asserts that their proposed changes to title 8 section 1710 are needed to make clear that CBB systems are allowed by title 8 regulations. Cal/OSHA issued a letter in April 2017² clarifying the acceptable use of the CBB system as currently permitted under subsection 1635(c) and described in part 4.0 of this evaluation. However, the petitioner claims that many employers in the steel erection industry are reluctant to rely solely on this letter and find the overlap of subsection 1635 with section 1710 confusing.

The petitioner also requested changes to subsections 1710(l)(1), 1710(l)(3), 1710(l)(4), and 1710(l)(5) that are not related to the CBB system. The petitioner provided no basis or rationale for these requested changes.

10.0 ANALYSIS

10.1 Proposed additions to title 8 section 1710(b) Definitions

The petitioner proposes to add new definitions to section 1710 for "access opening" and "cone and bar barricade (CBB)."

²The April 21, 2017 letter from Cal/OSHA to the Ironworkers International regarding the use of CBB was included in the petition and is available at: <https://www.dir.ca.gov/oshsb/documents/petition-570.pdf>.

10.1.1 Access Opening

The term “access opening” is currently used in subsection 1710(l)(1), and the petitioners use the term in their proposed new subsection 1710(l)(8) for CBB. The terms “access” and “openings” are currently defined separately in title 8 section 1504, Definitions, although the term “access opening,” as a combined term, is not defined.

§1504. Definitions.

(a) The following definitions shall apply in the application of these Orders.

Access. A means of reaching a workspace or a work area.

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Opening. An opening in any floor or platform, 12 inches or more in the least horizontal dimension. It includes: stairway floor openings, ladderway floor openings, hatchways and chute floor openings.

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Based on the existing definitions, the meaning of the term “access opening” is obvious. A new definition would be unnecessary.

10.1.2 Cone and Bar Barricade (CBB)

The CBB system is fully described in the petitioners new suggested subsection 1710(l)(8). The proposed definition for CBB provides no additional substantive information that is not in their proposed subsection 1710(l)(8). The definition is not needed.

10.2 Proposed changes to title 8 section 1710(l)(1) Temporary Flooring – planking and decking

The petitioners propose the following changes to subsection 1710(l)(1):

1. Delete the minimum thickness requirements for floor planking and decking and instead require planking and decking of “sufficient strength to carry the working load” and at a minimum have the strength of “lumber” as defined in section 1504.
2. Delete the requirement that planking be laid tight.
3. Delay the requirement that “planking and decking be secured” to “planking and decking be secured as soon as practical.”

These changes reduce employee safety as follows:

1. Deleting the minimum thickness requirement for planking and decking would make the requirements in subsection 1710(l)(1) unclear. The proposed change would provide less

direction to employers who may not know what floor thickness or strength is needed to carry the working load. The definition of lumber in section 1504 lists different types of lumber and does not provide one specific strength.

2. Deleting the requirement for planking to be laid tight would allow gaps to exist between planks and create fall hazards for employees.
3. Delaying the requirement for when planking must be secured would increase the time employees are exposed to unstable work surfaces and create additional fall hazards for employees.

These suggested changes regarding minimum decking and planking thickness are contrary to the California Labor Code section 7254, which requires temporary floors to be at least two inches thick.

The suggested changes are not as effective as the federal OSHA regulation. 29 CFR 1926.754(e)(5)(i) requires decking to be laid tightly and to be immediately secured upon placement.

10.3 Proposed changes to title 8 section 1710(l)(3) fall protection at the periphery of buildings

The petitioners propose to change subsection 1710(l)(3) to allow the use of personal fall protection in lieu of wire rope guardrails at exposed edges of buildings. This change would allow the replacement of a passive fall protection system with an active fall protection system, contrary to the hierarchy of safety controls.³ This weakens employee protection by exposing employees to an increased risk of falling.

The proposed change is not as effective as the federal OSHA regulation. 29 CFR 1926.760(a)(2) and 1926.760(d)(3) require perimeter safety cables that meet the criteria for guardrail systems to be installed as soon as the metal decking is installed.

10.4 Proposed changes to title 8 section 1710(l)(4) Midrail protection.

The petitioners propose to change subsection 1710(l)(4) to delay when midrail protection must be installed. The change would not require midrail protection until after the steel erector employer determines the decking process is finished and the decking has been inspected.

Subsection 1710(l)(4) currently requires midrail protection to be installed as soon as the metal decking has been installed. The proposed change would weaken employee protection by increasing the time employees work without midrail protection.

³ Passive safety controls are always present, protect the employee at all times, and are not dependent on the employee taking correct action. Active safety controls only protect employees when the employee correctly deploys correctly uses the controls.

The proposed change is also less effective than the federal OSHA regulations. Subsection 29 CFR 1926.760(a)(2) requires perimeter safety cables to be installed as soon as metal decking is installed and 1926.760(d)(3) requires that perimeter safety cables meet the criteria for guardrails systems, which includes midrails.

10.5 Proposed change to title 8 subsection 1710(l)(5) Installation of Metal Decking.

The petitioners propose to change subsection 1710(l)(5) to delay when metal decking must be secured. The proposed change would not require metal decking to be secured until it is practicable for the employer. Currently, subsection 1710(l)(5) requires metal decking be secured immediately, except as provided in subsection 1710(n) (controlled decking zone).

The proposed change would weaken employee protection since it would increase the time employees are exposed to unstable work surfaces and create additional fall hazards for employees. The proposed change also confounds the requirements of 1710(l)(5) since the term “as soon as practicable” is less clear than the current term, “immediately.”

The proposed change is less effective than the federal OSHA regulation. 29 CFR 1926.754(e)(5)(i) is nearly identical to existing subsection 1710(l)(5) and requires metal decking be secured immediately except as provided in in subsection 1926.760(c) (controlled decking zone).

10.6 Proposed changes to title 8 section 1710(l)(6), holes and openings

The petitioners propose several non-substantive changes to subsection 1710(l)(6) to clarify the language. The petitioners also propose to delete the strength requirement for filling deck opening and holes.

The deletion of the strength requirements would weaken employee protection. The change would allow holes and openings to be filled with structures or equipment of undefined strength and potentially expose employees to falls. The change would also provide less guidance to employers and confound the requirements of subsection 1710(l)(6), by leaving strength requirements unanswered.

The proposed change is less effective than the federal OSHA regulation. 29 CFR 1927.754(e)(3)(i) requires covers for roof and floor openings to support twice the weight of employees, equipment and materials that may be imposed on the cover.

10.7 Proposed new title 8 section 1710(l)(8), cone and bar barricade system

The petitioners propose to add new subsection 1710(l)(8) to expressly allow the use of the CBB system and to expand when the CBB system can be used. The proposed subsection would allow

use of CBBs to warn employees of access openings in lieu of providing guardrails around opening or providing coverings over openings. The proposal would allow the CBB system to be used whenever a solidly planked or decked floor it is not practical. The petitioners' proposal requires CBBs to be at least 6 feet, but no more than 10 feet from openings, requires warning labels on the CBB cones, and requires employee training.

Currently, the CBB system is permitted under subsection 1635(c), as discussed in part 4.0 of this evaluation. Subsection 1635(c) allows barricades around holes (in lieu of covers or guardrails) only where work is in progress that requires floor openings to be uncovered. The subsection does not specify distances of barricades from floor openings, does not require warning labels on barricades, and does not require employee training.

The use of CBB system can be safer than covers when employees must access an opening repeatedly over a short period of time. Without the CBB system, each time employees begin work in an opening they must remove the cover, and each time they stop working in the opening, they must replace the cover. Employees are exposed to falls when removing or placing covers if they are not protected with a personal fall protection system. Guardrails cannot be used to protect employees who place and remove covers, as the guardrails would obstruct the work. The use of the CBB system, where there is a need for frequent access to an opening, can eliminate the repeated removing and replacing of covers and reduce exposure to falls. In these cases, the CBB system would enhance employee safety provided employees are effectively trained to not bypass CBBs and employers effectively establish and enforce the CBB system.

The CBB system is less protective than covers over openings when there is no need to frequently remove and replace covers over openings. The CBB system is a warning system only and can be easily bypassed. Employees who bypass a CBB will be exposed to falls. Where appropriate covers are continuously in place, they provide superior protection as employees are protected from falls through the holes at all times.

Possible additional hazards not addressed in the proposal when using a CBB system include vertically in-line openings at multiple levels. An employee or falling object could fall much greater distances if there are multiple holes on successive levels. The proposal also does not address fall protection for employees who work within the CBB area, prohibiting entry of unauthorized persons into CBB areas, and the covering of openings once work is complete and prior to allowing access by other trades.

11.0 CONCLUSION

Cal/OSHA carefully reviewed the petitioner's proposed changes to section 1710. The review included information provided in the petitioner's application as well as a demonstration video showing the intended use of CBB systems. A site visit was also conducted by Cal/OSHA staff at a project in Oakland, California to observe the application of a CBB system at an active work

location. Based on the information reviewed, Cal/OSHA recommends that an advisory committee be convened to consider the petitioner's proposals, subject to the following:

11.1 Proposed additions to title 8 section 1710(b), 1710(l)(1), 1710(l)(3), 1710(l)(4), 1710(l)(5), 1710(l)(6)

The proposed changes to subsections 1710(l)(1), 1710(l)(3), 1710(l)(4), 1710(l)(5), 1710(l)(6) do not need to be considered.

11.2 Proposed changes to title 8 section 1710(l)(8)

The use of CBB systems should be limited to situations where work is in progress that requires floor openings to be uncovered. The proposals to specify the distance of barricades from openings, require warning labels on CBB systems, and require training of employees should be considered. The proposal to clarify in subsection 1710(l) that the provisions of subsection 1635(c) apply to decking and planking during structural steel erection work should also be considered.