

Code Technologies Committee Report Climbable Gaurds – Group A changes:

There are 11 areas of study currently listed under CTC.

1. Balanced Fire Protection
 - 1.1. Vertical Opening
 - 1.2. Roof Vents
2. Carbon Monoxide Detectors
3. Nursing Care Facilities
4. Child Window Safety
5. Climbable Guards
6. Elevator Lobby
7. Emergency Evacuation with Elevators
8. ADA/IBC Coordination
9. Fire rated glazing
10. Relocatable Modular Building
11. Unenclosed Exit Stairs

Following are code change proposals submitted through CTC from Climbable Guards study group and related changes.

Climbable Guards

Code Change #	Section	CTC (x) or Related (o)	Position					Comments
			Oppose & Testify	Oppose	No Position	Support	Support & Testify	
E106	1013.3	x						
E165	1028	o						Guards around assembly seating

E106 – 12

1013.3 (IFC [B] 1013.3)

Proponent: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee

Revise as follows:

1013.3 (IFC [B] 1013.3) Height. Required guards shall not be less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces,
2. On the line connecting the leading edges of the tread nosings, and
3. On ramps from the ramp surface at the guard.
4. From a seatboard where a guard would be required at the walking surface and the seatboard is part of the guard or adjacent to the guard.

Exceptions:

1. For one- and two- family dwellings and townhouses in Group R-2 and R-3, For occupancies in Group R-3 not more than three stories above grade in height and required guards within individual dwelling units and in areas serving the dwelling unit in occupancies in Group R-2 not more than three stories above grade in height with separate means of egress, required guards shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or fixed seating seatboard.
2. For Group R-2 and R-3 units, required guards within the dwelling unit shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surface or seatboard.
- ~~3~~2. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
- ~~4~~3. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
- ~~5~~4. The guard height in assembly seating areas shall comply with Section 1028.14.
- ~~6~~5. Along alternating tread devices and ship ladders, guards whose top rail also serves as a handrail, shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.

Reason: The purpose of this change is to require higher guards when a fixed bench is part of or immediately adjacent to a guard. The concern is child safety for when children stand on a seat and possibly tip over the guard. The reference back to the floor surface in new Item 4 is to clarify where the measurement for the drop-off for where a guard is required is different from the measurement for the guard height.

The changes to Exception 1 is to coordinate better with IRC. The guard height is permitted to be 36" both inside and outside the individual dwelling unit. Where a balcony or deck had a bench constructed as part of the guard, the guard height above the bench would be 36".

New exception 2 is to allow a 36" high guard along an interior balcony or mezzanine within a Group R-2 multi-story apartment. This would allow guards and handrails along stairways (current exceptions 2 and 3) to not have a large change in elevation at the top landing to meet up with the guard. For these buildings, if there is an exterior balcony for a unit, the guard height would be 42" minimum. That would include measurement from a bench if it was constructed as part of the guard.

The intent of this proposal is to coordinate with the proposal for perimeter guards along assembly seating being proposed by the ICC 300 Bleacher Safety Committee. It is not the intent for these provisions to apply to fixed assembly seating arrangements. There types of facilities have issues of line-of-sight, requirements for handrails and guards along aisle that are stepped, ramped or level, crowd issues, etc. that are more appropriately handled in Section 1028.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party.

The code issues are assigned to the CTC by the ICC Board as “areas of study”. Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April, 2005, the CTC has held twenty-two meetings – all open to the public.

Cost Impact: None

E106-12

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

E165-12

1009.16(New), 1010.11, 1013.2, 1013.3, 1028.14, 1028.14.1, 1028.14.2, 1028.14.3; (IFC [B] 1009.16(New), 1010.11, 1013.2, 1013.3, 1028.14, 1028.14.1, 1028.14.2, 1028.14.3)

Proponent: Dan Casella, Chair, ICC 300 Development Committee, Standard for Bleachers, Folding and Telescopic Seating and Grandstands

Revise as follows:

1028.14 (IFC [B] 1028.14) Assembly guards. Guards adjacent to seating in a building, room or space used for assembly purposes shall be provided where required by Section 1013 and shall be constructed in accordance with Section 1013 except where provided in accordance with empty Sections 1028.14.1 through 1028.14.34. At bleachers, grandstands and folding and telescopic seating, guards must be provided where required by ICC 300 and Section 1028.14.1.

1028.14.1 (IFC [B] 1028.14.1) Perimeter guards. Perimeter guards shall be provided where the footboards or walking surface of seating facilities are more than 30 inches (762 mm) above the floor or grade below. Where the seatboards are adjacent to the perimeter, guard height shall be 42 inches (1067 mm) high minimum, measured from the seatboard. Where the seats are self-rising, guard height shall be 42 inches (1067 mm) high minimum, measured from the floor surface. Where there is an aisle between the seating and the perimeter, the guard height shall be measured in accordance with Section 1013.2.

Exceptions:

1. Guards that impact line-of-sight shall be permitted to comply with Section 1028.14.3.
2. Bleachers, grandstands and folding and telescopic seating shall not be required to have perimeter guards where the seating is located adjacent to a wall and the space between the wall the seating is less than 4 inches (102 mm).

~~**1028.14.1-1028.14.2 (IFC [B] 1028.14.1-1028.14.2) Cross aisles.**~~ Cross aisles located more than 30 inches (762 mm) above the floor or grade below shall have guards in accordance with Section 1013.

Where an elevation change of 30 inches (762 mm) or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches (660 mm) above the aisle floor shall be provided.

Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.

~~**1028.14.2-1028.14.3 (IFC [B] 1028.14.2-1028.14.3) Sightline-constrained guard heights.**~~ Unless subject to the requirements of Section ~~1028.14.3-1028.14.4~~, a fascia or railing system in accordance with the guard requirements of Section 1013 and having a minimum height of 26 inches (660 mm) shall be provided where the floor or footboard elevation is more than 30 inches (762 mm) above the floor or grade below and the fascia or railing would otherwise interfere with the sightlines of immediately adjacent seating. ~~At bleachers, a guard must be provided where required by ICC 300.~~

~~**Exception:**~~ The height of the guard in front of seating shall be measured from the adjacent walking surface.

~~**1028.14.3-1028.14.4 (IFC [B] 1028.14.3-1028.14.4) Guards at the end of aisles.**~~ A fascia or railing system complying with the guard requirements of Section 1013 shall be provided for the full width of the aisle where the foot of the aisle is more than 30 inches (762 mm) above the floor or grade below. The fascia or railing shall be a minimum of 36 inches (914 mm) high and shall provide a minimum 42 inches (1067 mm) measured diagonally between the top of the rail and the nosing of the nearest tread.

1009.16 (IFC [B] 1009.16) Guards. Guards shall be provided where required by Section 1013 and shall be constructed in accordance with Section 1013.

1010.10 ~~1010.10~~ (IFC [B] 1010.10 ~~1010.10~~) Guards. Guards shall be provided where required by Section 1013 and shall be constructed in accordance with Section 1013.

1013.2 (IFC [B] 1013.2) Where required. *Guards* shall be located along open-sided walking surfaces, including *mezzanines, equipment platforms, aisles, stairs, ramps* and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. *Guards* shall be adequate in strength and attachment in accordance with Section 1607.8.

Exception: *Guards* are not required for the following locations:

1. On the loading side of loading docks or piers.
2. On the audience side of *stages* and raised *platforms*, including ~~steps~~ stairways leading up to the *stage* and raised *platforms*.
3. On raised *stage* and *platform* floor areas, such as runways, *ramps* and side *stages* used for entertainment or presentations.
4. At vertical openings in the performance area of *stages* and *platforms*.
5. At elevated walking surfaces appurtenant to *stages* and *platforms* for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating where *guards* in accordance with Section 1028.14 are permitted and provided.

1013.3 (IFC [B] 1013.3) Height. Required guards shall not be less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces,
2. On ~~stairs~~ stairways and aisle stairs, from the line connecting the leading edges of the tread nosings, and
3. On ramps and ramped aisles, from the ramp surface at the guard.

Exceptions:

1. For occupancies in Group R-3 not more than three stories above grade in height and within individual dwelling units in occupancies in Group R-2 not more than three stories above grade in height with separate means of egress, required guards shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or fixed seating.
2. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
3. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
4. The guard height in assembly seating areas shall comply with Section 1028.14 as applicable.
5. Along alternating tread devices and ship ladders, guards whose top rail also serves as a handrail, shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.

Reason: The intent is to deal with guards consistently for stairways, ramps and aisles (level, stepped and ramped). The situations unique to assembly seating will be addressed in 1028: at the outside perimeter; at cross aisles; where sightline-constraints are present; and at the end of the aisle. Guards at other locations will be address by the general provisions in Section 1013.

The 2012 ICC 300 does not include provisions for perimeter guards. It is the intent of the ICC 300 bleacher committee to propose the perimeter guard requirement into the bleacher standard during the next update cycle.

- 1009.16 – Add language to require guards at sides of stairways the same as at ramps.
- 1010.10 – Relocate guard requirement at ramps to immediately follow handrails. The handrails and guards should work as a unit.
- 1013.2 – Add aisles to the general requirements so that raised aisles that are not specifically addressed in Section 1028.14 are also be required to have guards.
- 1013.3 – Add aisle descriptors so that the guard height is 42" for aisles unless specifically addressed in Section 1028.14. An example would be side aisles.
- 1028.14 –The reference back to Section 1013 for guard construction is consistent with stairways and ramps. This will address situation other than that covered by subsections. The allowance to use ICC 300 is a general reference for similar guard situation, so it was relocated from 1028.14.2.
- 1028.14.1 (new) – There is a question regarding where guards are required around the perimeter of assembly seating since the walking surface for the last row of seating is not immediately adjacent to a drop off. This question exists for ICC 300 and other assembly seating arrangements. ICC 300 requires guards with 4" openings where the floor surface has an adjacent 30" drop off (ICC 300 Section 408). The dropoff is measure from the floor rather than the seatboard because the ICC 300 committee did not feel it was appropriate to require guards in a two or three row bleacher system. The guard height would be measured from the seatboard to address when people stand on the seats. Where seats are self rising, the guard height would be measured from the floor. Self-rising seats have backs and are very difficult to stand on.
 - Exception 1 is to allow for the limited situation where the guards at the sides of the seating may possible affect the line-of-sight in wide venues.
 - Exception 2 will permit bleacher systems constructed inside the building to use the building walls are perimeter guards if the opening between the bleacher and the wall is less than the opening permitted for guards.
- 1028.14.2 (renumbered 1028.14.3) – The allowance to look at ICC 300 for guards is relocated to the general guard requirement in 1028.14. The exception is not required for two reasons – guard height measured from the seat is addressed in the new section for perimeter guards in 1028.14.1 and the existing text in 1028.14.2 does not require measurement from the seatboard in front of the first balcony row.

The purpose of the ICC 300 standard is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, and safety to life and property relative to the construction, alteration, repair, operation, and maintenance of new and existing temporary and permanent bench bleachers, folding and telescopic seating, and grandstands. Information can be downloaded from the following website: <http://www.iccsafe.org/cs/standards/IS-BLE/Pages/default.aspx>. Since its inception in March 2000, the committee has produced 3 editions, the latest edition being 2012. All meeting are open to the public.

Cost Impact: None

E165-12

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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