S U B S T I T U T E O R D I N A N C E A S A M E N D E D
Passed: 7 October 2009
BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:

SECTION 1. Title 18 of the Municipal Code of the City of Chicago is hereby amended by repealing the existing Chapter 18-30 and by inserting in its place a new Chapter 18-30, as follows:

Chapter 18-30

Elevators, Escalators, Moving Walks, Dumbwaiters, Material Lifts, Platform Lifts, Stairway Chairlifts, Conveyors and Related Equipment

ARTICLE 1. GENERAL REQUIREMENTS

18-30-001 Scope.

This chapter shall regulate the design, construction, installation, operation, testing, inspection, maintenance, alteration and repair of all of the following equipment: elevators, escalators, moving walks, dumbwaiters, material lifts, platform lifts, stairway chairlifts, and vertical reciprocating conveyors and related equipment.

18-30-005 Applicability.

The following persons are responsible for the equipment regulated by this chapter and shall comply with the requirements of this chapter: the owner of the building in which the equipment is located, the building owner's agent, the owner of the equipment, the equipment owner's agent, and any person charged with managing, controlling or reporting on the equipment within the scope of services provided by such person pursuant to a written contract.

18-30-010 Referenced codes and standards.

The following standards and codes are adopted by reference and, unless otherwise modified by this chapter, shall be considered part of the requirements of this chapter to the extent of each prescribed reference: American National Standard, *Safety Code for Elevators and Escalators*, ASME A17.1–2007/CSA B44-07 (hereinafter known as "ASME"); American National Standard, *Performance-Based Safety Code for Elevators and Escalators*, ASME A17.7–2007/CSA B44.7-07; American National Standard, *Guide for Inspection of Elevators, Escalators, and Moving Walks*, ASME A-17.2–2004 (hereinafter known as "ASME A17.2"); American National Standard, *Safety Code for Existing Elevators and Escalators*, ASME A17.3–2005 (hereinafter known as "ASME EI"); American National Standard, *Safety Standard for Platform Lifts and Stairway Lifts*, ASME A18.1-2005 (hereinafter known as "A18.1"); and American National Standard, *Safety Standard for Conveyors and Related Equipment*, ASME B20.1-2003 (hereinafter known as "B20.1"). If differences occur between the provisions of this chapter and the referenced standards, the provisions of this chapter shall apply.

Existing installations shall comply with the requirements set forth in Articles 13 and 14 of this chapter**.**

18-30-015 Certificate of compliance–Required.

No person responsible for any equipment regulated by this chapter, as defined in section 18-30-005, shall operate or cause to be operated any elevator, moving walk, material lift, stairway chairlift, vertical reciprocating conveyor, movable stage, movable orchestra floor, platform lift or escalator unless a certificate of compliance has been issued by the building commissioner and is posted in accordance with the requirements of subsection (a) of section 13-20-110. Any person who violates any requirement of this section shall be fined not less than $2,000.00 nor more than $5,000.00 for each offense. Each day that a violation continues shall constitute a separate and distinct offense to which a separate fine shall apply.

18-30-017 Submission of required documents.

If, pursuant to the requirements of section 2-22-040(8) or section 13-20-014, the building commissioner authorizes a mandated inspection of any equipment regulated by this chapter, the owner of the building in which such equipment is located shall comply with the requirements set forth in section 13-20-014 and with all applicable rules and regulations promulgated by the commissioner. For purposes of this section, the term "owner" shall have the meaning ascribed to the term in section 13-4-010.

18-30-020 Preface of ASME–Adopted without modification.

The Preface of ASME is adopted by reference and shall apply without modification.

18-30-030 Part 1 of ASME–Adopted with modifications.

The provisions of Part 1 of ASME are adopted by reference and shall apply with the following modifications:

1. Section 1.3 (Definitions). Add definition: "**existing installation or existing**: an installation that has been legally permitted by the Department of Buildings prior to the effective date of this Ordinance."

ARTICLE 2. ELECTRIC ELEVATORS

18-30-040 Part II of ASME–Adopted with modifications.

The provisions of Part 2 of ASME are adopted by reference and shall apply with the following modifications:

1. **2.12.7.1.1** (Hoistway Access Switches). Revise to read: "Hoistway access switches shall be provided at (a) the lowest landing for access to the pit, if a separate pit access door is not provided, and (b) the top landing for access to the top of the car."

2. **2.12.7.1.2** (Hoistway Access Switches). Delete this requirement.

3. **2.14.6.1.1** (Types of Gates). Revise to read: "For elevators designed for Class A, Class B or Class C loading (see 2.16.2.2), car gates shall be either of the vertically sliding type (see 2.14.6.2.) or the horizontally sliding collapsible type (see

2.14.6.3)."

4. **2.14.6.1.2** (Types of Gates). Delete this requirement.

5. **2.18.1** (Speed Governors Required and Location). Revise to read: "2.18.1 Speed Governors Required and Location. (See also 2.7.6.3.4)."

6. **2.18.5.1** (Governor Ropes: Material and Factor of Safety). Revise to read: "Governor ropes shall be made of iron, steel, monel metal, phosphor bronze or stainless steel. They shall be of a regular-lay construction and not less than 1/4 in. (6mm) in diameter. The factor of safety of governor ropes shall be not less than 5. Where provided, ropes of a diameter less than 3/8 in. (9.5 mm) shall have a factor of safety of not less than 8, and shall be 6, 8 or 9 strand constructions. Tiller-rope construction shall not be used."

7. **2.18.7.4** (Design of Speed-Governor Sheaves and Traction Between Speed-Governor Rope and Sheave). Revise to read: "Where governor ropes of a diameter of 3/8 in. (9.5 mm) or greater are used, the pitch diameter of governor sheaves and governor tension sheaves shall be not less than the product of the diameter of the rope and the applicable multiplier listed in Table 2.18.7.4, based on the rated speed and the number of strands in the rope. Ropes of a diameter less than 3/8 in. (9.5 mm) shall have a sheave pitch diameter to rope diameter ratio of not less than 30."

8. **Table 2.18.7.4** (Multiplier for Determining Governor Sheave Pitch Diameter). Revise to read:

Table 2.18.7.4 Multiplier for Determining Governor Sheave Pitch Diameter

Rated Speed			
m/s	ft/min	Number of strands	Multiplier
1.00 or less	200 or less	6	42
1.00 or less	200 or less	8 or 9	30
Over 1.00	Over 200	6	46
Over 1.00	Over 200	8 or 9	32

9. **2.20.1** (Suspension Means). Revise to read: "Elevator cars shall be suspended by steel wire ropes, or elastomeric coated steel belts attached to the car frame or passing around sheaves attached to the car frame specified in 2.15.1. Suspension members that have previously been installed and used on another installation shall not be reused.

Only iron (low carbon steel) or steel wire ropes having the commercial

classification “Elevator Wire Rope”, or wire rope specifically constructed for elevator use, or elastomeric coated steel belts shall be used for the suspension of elevator cars and for the suspension of counterweights. The wire material for wire ropes shall be manufactured by the open-hearth or electric furnace process or their equivalent.”

10. **2.20.2.1** (On Crosshead Data Plate). Revise to read: “The crosshead data plate required by 2.16.3 shall bear the following data:

(a) the type of suspension means;

(b) the number of suspension members;

(c) either the diameter or width and thickness in millimeters (mm) or inches (in.), as applicable; and

(d) the manufacturer’s rated breaking force per suspension member in kilo Newton (kN) or pounds (lbs.)”

11. **2.20.2.2** (On Rope Data Tag). Revise to read: “2.20.2.2 On Suspension Means Data Tag. A metal data tag shall be securely attached to one of the suspension means fastenings. This data tag shall bear the following data:

(a) type of suspension (steel wire rope, or elastomeric coated steel belt);

(b) either the diameter or the width and thickness in mm (in.), as applicable;

(c) the manufacturer’s minimum breaking force in Kilo Newton (kN) or pounds (lbs.);

(d) the grade of material used or the manufacturer’s designation, as applicable;

(e) the construction classification, where applicable;

(f) for steel wire rope, nonpreformed, if applicable;

(g) for steel wire rope, finish coating, if applicable;

(h) for steel wire rope, compacted strands, if applicable;

(i) the name or trademark of the manufacturer of the suspension means;

(j) the name of the person and organization who installed the suspension means;

(k) the month and year the suspension means were installed;

(l) the month and year the suspension means were first shortened;

(m) lubrication information, if applicable.

A new tag shall be installed at each suspension member renewal. The material and marking of the data tag shall conform to 2.16.3.3, except that the height of the letters shall be not less than 1.5 mm (0.06 in.)."

12. **2.20.3** (Factor of Safety). Revise to read: "The factor of safety of the suspension means shall not be less than shown in Table 2.20.3. Figure 8.2.7 gives the minimum factor of safety for intermediate speeds. The factor of safety shall be based on the actual speed of the suspension means corresponding to the rated speed of the car.

The factor of safety shall be calculated by the following formula:

$$f = \frac{S \times N}{W}$$

where

f = factor of safety

N = number of runs of suspension members under load. For 2:1 arrangements, N shall be two times the number of suspension members used, etc.

S = manufacturer's rated breaking strength of one suspension member

W = maximum static load imposed on all car suspension members with the car and its rated load at any position in the hoistway."

13. **2.20.4** (Minimum Number and Diameter of Suspension Ropes). Revise to read: "2.20.4 Minimum Number and Diameter of Suspension Means. The minimum number of suspension members used shall be three for traction elevators and two for drum-type elevators, except that elastomeric coated steel belts shall not be used on drum-type elevators.

Where a car counterweight is used, the number of counterweight suspension members used shall be not less than two.

The term "diameter," where used in reference to ropes, shall refer to the nominal diameter as given by the rope manufacturer.

The minimum diameter of suspension and counterweight steel wire ropes shall be 4 mm (0.156 in.). Outer wires of the steel wire ropes shall be not less than 0.21 mm (0.008 in.) in diameter."

14. **2.20.5** (Suspension-Rope Equalizers). Revise to read: "2.20.5 Suspension-Member Equalizers".

15. **2.20.5.1** Revise to read: "2.20.5.1 Suspension-member equalizers, where provided, shall be of the individual compression spring type or shall meet the requirements of 2.20.5.3. Springs in tension shall not be used to attach suspension members."

16. **2.20.5.2** Revise to read: "2.20.5.2 Single-bar-type equalizers shall be permitted only for winding drum machines with two steel wire ropes, to attach the steel wire ropes to the dead-end hitch plate, provided it meets the requirements of 2.20.5.3."

17. **2.20.5.3** Revise to read: "2.20.5.3 Equalizers other than the individual compression spring type shall be permitted, provided that their strength is established through tensile engineering tests. Such tests shall show the ultimate strength of the equalizers and its fastenings in its several parts and assembly to be not less than 10% in excess of the strength of the suspension members as required by 2.20.3."

18. **2.20.9** (Suspension Rope Fastening). Revise to read: "2.20.9 Suspension Member Fastening)".

19. **2.20.9.1** (Type of Rope Fastenings). Revise to read: "2.20.9.1 Type of Suspension Member Fastenings. The car and counterweight ends of suspension means, or the stationary hitch-ends where multiple roping is used, shall be fastened in such a manner that all portions of the member, except the portion inside the sockets, shall be readily visible. Fastening shall be:

    (a) by individual tapered sockets (see 2.20.9.4) or other types of fastenings that have undergone adequate tensile engineering tests, provided that

        (1) such fastenings conform to 2.20.9.2 and 2.20.9.3;

        (2) the socketing is such as to develop at least 80% of the ultimate breaking strength of the strongest rope to be used in such fastenings; or

    (b) by individual wedge sockets (see 2.20.9.5 for ropes and 2.20.9.9 for elastomeric coated steel belts); and

    (c) U-bolt-type rope clamps or similar devices shall not be used for suspension rope fastenings."

20. **2.20.9.2** (Adjustable Shackle Rods). Revise to read: "The car ends, or the car counterweight dead ends where multiple roping is used, of all suspension means of traction-type elevators shall be provided with shackle rods of a design that will permit individual adjustment of the member lengths. Similar shackle rods shall be provided on the car or counterweight ends of compensating means."

21. **2.20.9.3** (General Design Requirements). Revise to read: "Suspension means fastenings shall conform to 2.20.9.3.1 through 2.20.9.3.9."

22. **2.20.9.3.1** (General Design Requirements). Revise to read: "The portion of the suspension means fastening that holds the suspension means (socket) and the shackle rod shall be in one piece (unit construction), or separate."

23. **2.20.9.3.2** (General Design Requirements). Revise to read: "The socket shall be either fabricated or cast or forged steel, provided that where the socket and the shackle rod are in one piece (unit construction), the entire fastening shall be of forged steel."

24. **2.20.9.3.3** (General Design Requirements). Revise to read: "Where the shackle rod and suspension means socket are not in one piece, the shackle rod shall be of forged or rolled steel."

25. **2.20.9.3.4** (General Design Requirements). Revise to read: "Cast or forged steel suspension means sockets, shackle rods, and their connections shall be made of unwelded steel, having an elongation of not less than 20% in a gauge length of 50 mm (2 in.), when measured in accordance with ASTM E 8, and conforming to ASTM A 668, Class B for forged steel, and ASTM A 27, Grade 60/30 for cast steel, and shall be stress relieved. Steels of greater strength shall be permitted, provided that they have an elongation of not less than 20% in a length of 50 mm (2 in.)."

26. **2.20.9.3.5** (General Design Requirements). Revise to read: "Fabricated sockets shall be permitted provided that the following conditions are met:

    (a) Socket components shall be of rolled steel construction;

    (b) The factor of safety of the weld and heat affected zone shall not be less than 12;

    (c) Welding shall be performed by welders qualified to 8.8.1; and

    (d) Welds shall conform to 8.8.2."

27. **2.20.9.3.6** (General Design Requirements). Revise to read: "Where the shackle rod is separate from the socket the fastening between the two parts shall be positive, and such as to prevent their separation under all conditions of operation of the elevator.

Where the connection of the two parts is threaded, the thread design, tolerance, and manufacture shall conform to the requirements of ASME B1.13M, M-6H/6g or equivalent, coarse or fine threads (ASME B1.1, UNC or UNF Class 2A and Class 2B threads). The thread size and the length of the thread engagement of the rod in the socket shall be sufficient to insure the alignment of the engaged members and that the strength requirements of 2.20.9.3.7 are met. In addition, means shall be provided to restrict the turning to the rod in the socket and prevent unscrewing of the connection in normal operation.

Eye bolts used as connections with clevis-type sockets shall be of forged steel conforming to ASTM A 668, Class B (heat treated), without welds."

28. **2.20.9.3.7** (General Design Requirements). Revise to read: "Sockets shall be of such strength that the suspension member will break before the socket is materially deformed."

29. **2.20.9.3.8** (General Design Requirements). Revise to read: "The shackle rod, eye bolt, or other means used to connect the socket to the car or counterweight shall have a strength at least equal to the manufacturer's minimum breaking strength of the suspension member."

30. **2.20.9.3.9** (General Design Requirements). Add the following new requirement: "Fastenings incorporating anti-friction devices that will permit free spinning of the suspension members shall not be used."

31. **2.20.9.4** (Tapered Rope Sockets). Revise to read: "2.20.9.4 Tapered Rope Sockets. The use of tapered rope sockets shall be permitted only for steel wire ropes, be of a design as shown in Fig. 2.20.9.4, and shall conform to 2.20.9.2 and 2.20.9.3 and 2.20.9.4.1 through 2.20.9.4.5."

32. **2.20.9.5** (Wedge Rope Sockets). Revise to read: "2.20.9.5 Steel Wire Rope Sockets. Wedge socket assembles shall be of a design as shown in Figure 2.20.9.5, and shall conform to 2.20.9.2 and 2.20.9.3, and 2.20.9.5.1 through 2.20.9.5.6."

33. **2.20.9.5.1.** (Wedge Rope Sockets). Revise to read: "A test specimen consisting of the strongest suspension rope for a given diameter and wedge socket assembly shall be subjected to a destructive tensile engineering test. The rope socketing shall develop at least 80% of the ultimate breaking strength of the strongest rope to be used in such a fastening without the rope slipping through the assembly."

34. **2.20.9.5.4** (Wedge Rope Sockets). Revise to read: "When the steel wire rope has been seated in the wedge socket by the load on the rope, the wedge shall be visible, and at least two wire-rope retaining clips shall be provided to attach the termination side to the load-carrying side of the rope (see Fig. 2.20.9.5). The first clip shall be placed a maximum of 4 times the rope diameter above the socket and the second clip

shall be located within 8 times the rope diameter above the first clip. The purpose of the two clips is to retain the wedge and prevent the rope from slipping in the socket should the load on the rope be removed for any reason. The clips shall be designed and installed so that they do not distort or damage the rope in any manner."

35. **2.20.9.5.5** (Wedge Rope Sockets). Revise to read: "Markings on the wedge socket assembly components shall be as follows:

    (a) Each socket shall be permanently and legibly marked or color-coded to identify the corresponding wedge, or wedges, rope size and material to be used in the assembly. The markings shall be visible after installation.

    (b) Each wedge shall be permanently and legibly marked or color coded to identify the corresponding socket, or sockets, and rope size and material, within which it is to be inserted to form an assembly. The marking shall be visible after installation."

36. **2.20.9.9** (Elastomeric Coated Steel Belt Wedge Sockets). Add the following new requirement: "2.20.9.9 Elastomeric Coated Steel Belt Wedge Sockets. Wedge socket assemblies for elastomeric coated steel belts shall conform to 2.20.9.2 and 2.20.9.3 and 2.20.9.9.1 through 2.20.9.9.5."

37. **2.20.9.9.1** (Elastomeric Coated Steel Belt Wedge Sockets). Add the following new requirement: "A test specimen consisting of the strongest elastomeric coated steel belt for given elastomeric coated steel belt dimensions and wedge socket assembly shall be subjected to a destructive tensile engineering test. The elastomeric coated steel belt socket shall develop at least 80% of the manufacturer's minimum breaking force of the strongest elastomeric coated steel belt to be used in such a fastening without the elastomeric coated steel belt slipping through the assembly."

38. **2.20.9.9.2** (Elastomeric Coated Steel Belt Wedge Sockets). Add the following new requirement: "Wedge elastomeric coated steel belt socket assemblies shall be of such a strength that when tested as in 2.20.9.9.1, the elastomeric coated steel belt shall break before the socket or wedge is materially deformed."

39. **2.20.9.9.3** (Elastomeric Coated Steel Belt Wedge Sockets). Add the following new requirement: "Suppliers of elastomeric coated steel belt wedge sockets shall submit certification showing that the sockets, with visible permanent manufacturer's identification, have successfully passed the tests described in 2.20.9.9.1 and 2.20.9.9.2 at a testing laboratory."

40. **2.20.9.9.4** (Elastomeric Coated Steel Belt Wedge Sockets). Add the following new requirement: "When the elastomeric coated steel belt has been seated in the wedge socket by the load on the elastomeric coated steel belt, the wedge shall be visible and

the end of the elastomeric coated steel belt shall be prevented from slipping in the socket should the load on the elastomeric coated steel belt be removed for any reason."

41. **2.20.9.9.5** (Elastomeric Coated Steel Belt Wedge Sockets). Add the following new requirement: "Markings on the wedge socket assembly components shall be as follows:

(a) Each socket shall be permanently and legibly marked or color-coded to identify the elastomeric coated steel belt size to be used in the assembly. The markings shall be visible after installation.

(b) Each wedge shall be permanently and legibly marked or color-coded to identify the corresponding socket or sockets and elastomeric coated steel belt size, within which it is to be inserted to form an assembly. The markings shall be visible after installation."

42. **2.24.2.1** (Driving Machines and Sheaves: Material and Grooving). Revise to read: "Sheaves and drums used with suspension and compensating members shall be constructed of materials conforming to 2.24.2.1.1 or 2.24.2.1.2 and shall either be

(a) provided with finished grooves for ropes; or

(b) lined with nonmetallic groove material."

43. **2.24.2.1.1** (Sheaves). Add this new requirement: "2.24.2.1.1 (Sheaves). Driving machine sheaves shall be integral with or directly attached to driving machine shafts.

Sheaves shall be provided with steel shafts and metal bearings. Plastic or fiber reinforced plastic sheaves shall not be regrooved.

Sheaves constructed of plastic, fiber reinforced plastic or combinations thereof shall have a factor of safety of not less than 10. The material used shall ensure that the factor of safety is not less than 8 during the service life of the sheave. The load to be used in determining the factor of safety shall be the resultant of the maximum tensions in the suspension means leading from the sheave with the elevator at rest and with the rated load in the car.

Sheaves constructed of metal shall comply with 2.24.3."

44. **2.24.2.1.2** (Drums). Add this new requirement: "2.24.2.1.2 (Drums). Drums used with suspension and compensating ropes shall be constructed of metal. Drums shall comply with 2.24.3."

45. **2.24.2.2** (Minimum Pitch Diameter). Revise to read: "Sheaves and drums used with

suspension and compensating ropes shall have a pitch diameter of not less than

(a) 40 times the diameter of the steel wire rope or cord diameter of the elastomeric coated steel belt where used with suspension means;

(b) 32 times the diameter of the steel wire rope or cord diameter of the elastomeric coated steel belt where used with compensating ropes."

46. **2.27.3.1.1** (Phase I Emergency Recall Operation). Revise to read: "A three-position key-operated switch shall be

(a) provided only at the designated level for each single elevator or for each group of elevators;

(b) labeled "FIRE RECALL" and its positions marked "RESET," "OFF" AND "ON" (in that order), with the "OFF" position as the center position. The "FIRE RECALL" letters shall be a minimum of 5 mm (0.25 in.) high in red or a color contrasting with a red background;

(c) located in the left door jamb of the elevator entrance. Where there is more than one elevator, the left elevator shall contain the switch. The switch shall be located not less than 6'6" and not more than 6'10" above the floor."

47. **2.27.3.1.2** (Phase I Emergency Recall Operation). Revise to read: "An additional key-operated "FIRE RECALL" switch, with two positions that will not change position without a deliberate action by the user, marked "OFF" and "ON" (in that order), shall be permitted only in the Elevator Control Panel for fire department operations (see 2.27.10)."

48. **2.27.3.1.4** (Phase I Emergency Recall Operation). Revise to read: "Only the "FIRE RECALL" switch(es) or fire alarm initiating devices located at floors that are served by the elevator, or in an elevator machine room, or a control space, or a control room (see 2.27.3.2) shall initiate Phase I Emergency Recall Operation."

49. **2.27.3.1.6(f)** (Phase I Emergency Recall Operation). Revise to read: "All car and corridor call buttons shall be rendered inoperative. All call-registered lights and directional lanterns shall be extinguished and remain inoperative. Car position indicators, where provided, shall remain operative. Where provided, landing position indicators shall be extinguished and remain inoperative, except at the designated level and the Elevator Control Panel (see 2.27.10), where they shall remain operative."

50. **2.27.3.1.6(j)** (Phase I Emergency Recall Operation). Revise to read: "Where an additional "FIRE RECALL" switch is provided (see 2.27.3.1.2), both "FIRE

RECALL" switches shall be in the "ON" position to recall the elevator to the designated level if the elevator was recalled to the alternate level (see 2.27.3.2.4)."

51. **2.27.3.1.6(k)** (Phase I Emergency Recall Operation). Revise to read: "To remove the elevator(s) from Phase I Emergency Recall Operation, the "FIRE RECALL" switch shall be rotated first to the "RESET," and then to the "OFF" position, provided that

    (1) the additional two-position "FIRE RECALL" switch (see 2.27.3.1.2), where provided, is in the "OFF" position; and

    (2) no fire alarm initiating device is activated (see 2.27.3.2)."

52. **2.27.3.2.1** (Phase I Emergency Recall Operation by Fire Alarm Initiating Devices). Revise to read: "In jurisdictions not enforcing the NBCC, fire alarm initiating devices used to initiate Phase I Emergency Recall Operation shall be provided as follows:

    (a) A smoke detector in each elevator landing lobby, or water flow switches that are part of an approved fire sprinkler system; and

    (b) A smoke detector in each associated elevator machine room, control space or control room.

    All smoke detectors shall be installed in accordance with NFPA 72. New smoke detector systems shall be of the addressable type. Expansion of existing systems shall be permitted, and shall have zone-annunciated devices. A separate smoke detector system, dedicated solely to initiating Phase I Emergency Recall Operation, is not required to notify the Fire Department via the Central Monitoring station or the City Tie Fire Alarm Box. Where required, smoke detector systems, in addition to initiating Phase I Emergency Recall Operation, shall notify the Fire Department via the Central Monitoring station or the City Tie Fire Alarm Box."

53. **2.27.3.2.3(a)** (Phase I Emergency Recall Operation by Fire Alarm Initiating Devices). Revise to read: "The activation of a fire alarm initiating device specified in 2.27.3.2.1(a) or 2.27.3.2.2(a) at any floor, other than at the designated level, shall cause all elevators that serve that floor, and any associated elevator of a group automatic operation, to be returned nonstop to the designated level."

54. **2.27.3.2.3(c)** (Phase I Emergency Recall Operation by Fire Alarm Initiating Devices). Delete this requirement (c).

55. **2.27.3.2.6** (Phase I Emergency Recall Operation by Fire Alarm Initiating Devices). Revise to read: "When a fire alarm initiating device in the machine room, control space or control room initiates Phase I Emergency Recall Operation, as required by 2.27.3.2.3 or 2.27.3.2.4, the visual signal [see 2.27.3.1.6(h) and Fig. 2.27.3.1.6(h)] shall illuminate intermittently only in a car(s) with equipment in that machine room,

control space or control room."

56. **2.27.3.3.1(b)** (Phase II Emergency Recall Operation). Revise to read: "(b) The car shall not respond to landing calls. Directional lanterns, where provided, shall remain inoperative. Car position indicators, where provided, shall remain operative. Landing position indicators, where provided, shall remain inoperative, except at the designated level and the Elevator Control Panel (see 2.27.10), where they shall remain operative."

57. **2.27.4.1** (Phase I Emergency Recall Operation: Nonautomatic Elevators). Revise to read: "A three-position key-operated switch shall be provided at the designated level for each single elevator or for each group of elevators. The three-position switch shall be labeled "FIRE RECALL" and its positions marked "RESET," "OFF," and "ON" (in that order), with the "OFF' position as the center position. The "FIRE RECALL" letters shall be a minimum of 5 mm (0.25 in.) high in red or a color contrasting with a red background. The three-position switch shall be located in the left door jamb of the elevator entrance. Where there is more than one elevator, the left elevator shall contain the switch. The switch shall be located not less 6'6" and not more than 6'10" above the floor.

An additional "FIRE RECALL" switch with two positions, "OFF" and "ON" (in that order), shall be permitted only at the Elevator Control Panel (see 2.27.10).

The switches shall be rotated clockwise to go from the "RESET" (designated level switch only), to the "OFF" and to the "ON" positions.

All keys shall be removable only in the "OFF" and "ON" positions.

Only the fire recall switch(es) or fire alarm initiating devices located at floors served by the elevator, or in an elevator machine room, or in a control space, or a control room (see 2.27.3.2) shall initiate Phase I Emergency Recall Operation. All "FIRE RECALL" switches shall be provided with an illuminated visual signal to indicate when Phase I Emergency Recall Operation is in effect.

When all switches are in the "OFF" position, normal elevator service shall be in effect and the fire alarm initiating devices required by 2.27.4.2 shall be operative.

When a "FIRE RECALL" switch is in the "ON" position, a visual and audible signal shall be provided to alert the attendant to return nonstop to the designated or alternate level. The visual signal shall read "FIRE RECALL – RETURN TO ___"
[insert level to which the car shall be returned (the designated or alternate level)]. The signal system shall be activated when Phase I Emergency Recall Operation is in effect.

Where an additional "FIRE RECALL" switch (see 2.27.3.1.2) is provided, both

"FIRE RECALL" switches must be in the "ON" position to recall the elevator to the designated level if the elevator was recalled to the alternate level.

Where an additional "FIRE RECALL" switch (see 2.27.3.1.2) is provided, it shall not affect the visual signal if the designated level fire alarm initiating device (see 2.27.3.2.4) has been activated.

To extinguish the audible and visual signals, the "FIRE RECALL" switch shall be rotated first to the "RESET" and then to the "OFF"position, provided that

(a) the additional two-position "FIRE RECALL" switch (see 2.27.3.1.2), where provided, is in the "OFF" position; and

(b) no fire alarm initiating device is activated (see also 2.27.3.2.4)

No device, which measures load, shall prevent operation of the elevator at or below the capacity and loading required in 2.16."

58. **2.27.4.2** (Phase I Emergency Recall Operation by Fire Alarm Initiating Devices). Revise to read: "Fire alarm initiating devices shall be installed and comply with the requirements of 2.27.3.2.1.

Phase I Emergency Recall Operation, conforming to 2.27.4.1, shall be initiated when any Phase I Emergency Recall Operation fire alarm initiating device at the elevator lobbies, machine room, control space, or control room is activated.

Phase I Emergency Recall Operation, when initiated by a Phase I Emergency Recall Operation fire alarm initiating device, shall be maintained until canceled by moving the "FIRE RECALL" switch to the "RESET" position.

When a fire alarm initiating device in the machine room, control space or control room initiates Phase I Emergency Recall Operation, as required by 2.27.3.2.3 or 2.27.3.2.4, the visual signal (see 2.27.23.1.6(h) and Fig.2.27.3.1.6(h)) shall illuminate intermittently only in a car(s) with equipment in that machine room, control space or control room."

59. **2.27.8** (Switch Keys). Revise to read: "The key switches required by 2.27.2 through 2.27.5 for all elevators in a building shall be operable by the same key. The keys shall be Group 3 Security (see 8.1). There shall be a key for each switch provided.

These keys shall be kept on the premises in a location readily accessible to firefighters and emergency personnel, but not where they are available to the public.

The key(s) shall be of a tubular, 7 pin, style 137 construction and shall have a bitting code of 6143521. The key shall be coded "FEO-K1". The possession of the "FEO-

K1" key shall be limited to elevator personnel, emergency personnel, elevator manufacturers and authorized personnel during checking of Firefighters' Emergency Operation.

The key(s) shall be kept in a metal box mounted in a conspicuous location at the designated level as approved by the Fire Department. The box shall have a lock-type cover which can be opened only by the Fire Department's alarm box key."

60. **2.27.10** (Elevator Control Panel). Add this new requirement: "Where an Elevator Control Panel is required as part of, or adjacent to, a Fire Alarm Control Panel by the High Rise Chapter (Chapter 13-76) of the Chicago Building Code, the location of the Elevator Control Panel shall be approved by the Chicago Fire Department.

Each elevator and each group of elevators covered by the Elevator Control Panel shall have the following information, devices and controls provided:

(a) Device(s) indicating elevators available for Firefighters' Service;

(b) Position indication for all operating elevators;

(c) Car directional arrows for all operating elevators;

(d) Standby Power Status Indicator(s);

(e) Standby Power Selections Switch(es);

(f) Fire Service Status (Phase I Status per group of elevator);

(g) Clear information, or a diagrammatic representation of the building, showing the location of each elevator;

(h) A two-position switch (see 2.27.3.1.2) labeled "FIRE RECALL" which activates Phase I Emergency Recall Operation for each single elevator or group of elevators and recalls the elevator(s) to its designated level. (Also see 2.27.3.1.6(j))"

ARTICLE 3. HYDRAULIC ELEVATORS

18-30-050 Part 3 of ASME–Adopted with modifications.

The provisions of Part 3 of ASME are adopted by reference and shall apply with the following modifications:

1. **3.18.4.1** (Metal Stops and/or Other Means). Revise to read: "Metal stops and/or other means shall be provided at one end of the plunger and at the packing head

end of the cylinder to prevent the plunger from traveling beyond the limits of the cylinder. The metal stops and/or other means shall be so designed and constructed as to stop the plunger traveling in the up direction at maximum speed under full load pressure, should the normal terminal stopping device (see 3.25.1) fail to operate, or at a reduced speed when a terminal speed-reducing device is provided as required by 3.25.2."

ARTICLE 4. ELEVATORS WITH OTHER TYPES OF DRIVING MACHINES

18-30-060 Part 4 of ASME–Adopted with modifications.

The provisions of Part 4 of ASME are adopted by reference and shall apply with the following modifications:

1. **SECTION 4.3** (Hand Elevators). Delete this section in its entirety. Hand elevators shall not be installed.

ARTICLE 5. SPECIAL APPLICATION ELEVATORS

18-30-070 Part 5 of ASME–Adopted without modification.

The provisions of Part 5 of ASME are adopted by reference and shall apply without modification.

ARTICLE 6. ESCALATORS AND MOVING WALKS

18-30-080 Part 6 of ASME–Adopted without modification.

The provisions of Part 6 of ASME are adopted by reference and shall apply without modification.

ARTICLE 7. DUMBWAITERS AND MATERIAL LIFTS

18-30-090 Part 7 of ASME–Adopted without modification.

The provisions of Part 7 of ASME are adopted by reference and shall apply without modification.

ARTICLE 8. GENERAL REQUIREMENTS

18-30-100 Part 8 of ASME–Adopted with modifications.

The provisions of Part 8 of ASME are adopted by reference and with the following modifications:

1. **8.6.2.5** (Repair of Ropes). Revise to read: "8.6.2.5 (Repair of Suspension and Compensation Members and Governor Ropes). Suspension and compensation members and governor ropes shall not be lengthened or repaired by splicing. (See 8.7.2.21)."

2. **8.6.3.2** (Replacement of a Single Suspension Rope). Revise to read: "8.6.3.2 (Replacement of a Single Suspension Member). If one member of a set of members is worn or damaged and requires replacement, the entire set of members shall be replaced. Provided, however, that if one member is damaged during installation or acceptance testing prior to being subjected to elevator service, it shall be permissible to replace a single damaged member with a new member if the requirements of 8.6.3.2.1 through 8.6.3.2.6 are met."

3. **8.6.3.2.1.** (Replacement of a Single Suspension Member). Revise to read: "The data for the replacement member must correspond to the member data specified in 2.20.2.2(a) through (h) for the other members."

4. **8.6.3.2.2** (Replacement of a Single Suspension Member). Revise to read: "The replacement member shall be provided with a suspension data tag conforming to 2.20.2.2."

5. **8.6.3.2.3.** (Replacement of a Single Suspension Member). Revise to read: "The suspension member, including the damaged member, shall not have been shortened since its original installation."

6. **8.6.3.2.5** (Replacement of a Single Suspension Member). Revise to read: "The tension of the new replacement member shall be checked and adjusted as necessary at semimonthly intervals over a period of not less than two months after installation. If proper equalization of suspension member tension cannot be maintained after a period of 6 months after installation, the entire set of members shall be replaced."

7. **8.6.3.2.6** (Replacement of a Single Suspension Member). Revise to read: "The replacement member shall be provided with the same type of suspension member fastening used with the other members."

8. **8.6.3.3** (Replacement of Ropes Other Than Governor Ropes). Revise to read: "Replacement of Suspension Members".

9. **8.6.3.3.1** (Replacement of Suspension Members). Revise to read: "Replacement of all suspension members shall conform to the following:

    (a) Replacement members shall be as specified by the original elevator manufacturer or be at least equivalent in strength, weight, and design.

(b) Members that have been previously used in another installation shall not be reused.

(c) When replacing suspension, compensating, and car or drum counterweight members, all members in a set shall be replaced, except as permitted by 8.6.3.2.

(d) The members in the set shall be new, and all from the same manufacturer, and of the same material, grade, construction, and size.

(e) Data tags conforming to 2.20.2.2 shall be applied.

(f) Suspension, car, and drum counterweight member fastenings shall conform to 2.20.9."

10. **8.6.3.3.2** (Rope Fastenings and Hitchplates). Revise to read: "8.6.3.3.2 Suspension Means Fastenings and Hitchplates). Replacement of suspension means fastenings and hitchplates shall conform to the following:

(a) When the suspension means fastenings are replaced with an alternate means that conforms to 2.20.9, existing hitch plates that cause interference between the replacement fastening shall have the replacement fastening staggered, or the hitch plates shall be replaced with a design that provides clearance between replacement shackles.

(b) Replacement hitch plates shall conform to 2.15.13.

(c) Replacement fastenings shall be permitted to be installed on the car only, the counterweights only, at either end of the dead-end hitches, or at both attachment points.

(d) Rope fastenings at the drum connection of winding-drum machines shall comply with 8.6.4.10.2."

11. **8.6.4.1** (Suspension and Compensating Wire Ropes). Revise to read: "8.6.4.1 Suspension and Compensating Means".

12. **8.6.4.1.1** (Suspension and Compensating Means). Revise to read: "Suspension and compensating means shall be kept sufficiently clean so that such means can be visually inspected."

13. **8.6.4.1.2** (Suspension and Compensating Means). Revise to read: "Steel wire ropes shall be lightly lubricated. Precautions shall be taken in lubricating

suspension steel wire ropes to prevent the loss of traction. Lubrication shall be in accordance with instructions on the rope data tag [see 2.20.2.2(m)], if provided."

14. **8.6.5.8** (Safety Bulkhead). This section of ASME shall not go into full force and effect until 36 months after passage and publication of this Ordinance. Provided however, that during such 36-month period, such existing installation shall be tested, at an interval of least once every 12 months, in accordance with the requirements set forth in 8.11.3.2 (Periodic Test Requirements: Category 1) of ASME.

15. **8.6.12** (Maintenance of Elevators, Dumbwaiters, Escalators, and Moving Walks). Delete this section in its entirety.

16. **8.7.2.21** (Suspension Ropes and Their Connections). Revise to read: "8.7.2.21 Suspension Means and Their Connections".

17. **8.7.2.21.1** (Change in Ropes). Revise to read: "8.7.2.21.1 Change in Suspension Means. Where the material, grade, number, or size of suspension means is changed, the new suspension members and their fastenings shall conform to 2.20. When existing sheaves are retained using suspension members different from those originally specified, the original elevator manufacturer or a licensed professional engineer shall certify the sheave material to be satisfactory for the revised application."

18. **8.7.2.21.2** (Addition of Rope Equalizers). Revise to read: "8.7.2.21.2 Addition of Suspension Member Equalizers. Where suspension member equalizers are installed, such equalizers shall conform to 2.20.5."

19. **8.7.2.21.3** (Addition of Auxiliary Rope-Fastening Devices). Revise to read: "8.7.2.21.3 Addition of Auxiliary Suspension Member-Fastening Devices. Where auxiliary suspension member-fastening devices are installed, such devices shall conform to 2.20."

20. **8.7.2.17** (Change in Travel or Rated Speed). Add the following requirement: "Any change in travel or rated speed of a drum-operated driving machine not conforming to 2.24.1 shall require replacement of the driving machine with a traction type machine conforming to 8.7.2.25 or a hydraulic driving machine conforming to 8.7.3.23."

21. **8.7.2.27.4(a)** (Controllers). Revise to read: "Where a controller is installed as part of an alteration, it shall conform to 2.25, 2.26.1.4, 2.26.1.5, 2.26.4 through 2.26.9, and 2.27.2 through 2.27.8. If the existing driving machine is a winding drum machine not conforming to 2.24.1, it shall be replaced with a traction driving machine conforming to 8.7.2.25 or a hydraulic driving machine conforming to 8.7.3.23."

22. **8.7.2.27.5** (Change in Type of Motion Control). Add the following requirement (i): "(i) If the existing driving machine is a winding drum machine not conforming to 2.24.1, it shall be replaced with a traction driving machine conforming to 8.7.2.25 or a hydraulic driving machine conforming to 8.7.3.23."

23. **8.7.2.27.6** (Change in Type of Operation Control). Add the following requirement (h): "(h) If the existing driving machine is a winding drum machine not conforming to 2.24.1, it shall be replaced with a traction driving machine conforming to 8.7.2.25 or a hydraulic driving machine conforming to 8.7.3.23."

24. **8.9.1.1** (Permanent Identification Number). Add the following new requirement: "A permanent identification number assigned by the department of buildings shall be included in the code data plate required by 8.9.1 or in a plate installed adjacent to the code data plate."

25. **8.10.3.2.2(z)** (Acceptance Inspections and Tests – Hydraulic Cylinders (Item 2.36)). Revise to read: "Hydraulic Cylinders (Item 2.36). For plunger stops [Item 3.4.3(a)], verify that a stop ring has been provided as required by 3.18.4.1 by inching the car against the stop ring from outside the car (not from the car top)."

26. **8.11.1.1** (Persons Authorized to make Periodic Inspections and Tests) Revise to read: "The inspector shall meet the qualifications requirements of the City of Chicago as set forth in rules and regulations promulgated by the building commissioner."

27. **8.11.2.1.3(cc)(3)** (Periodic Inspections and Tests). Replace Table 8.11.2.1.3 (cc)(3) with the following Table, including the two Notes to the following Table 8.11.2.1.3(cc)(3):

TABLE 8.11.2.1.3(cc)(3)

Nominal Rope Size	Maximum Reduced Diameter (min.)	
	in.	mm.
4 mm	0.153	3.875
6 mm	0.221	5.625
¼ in.	0.234	5.953
5/16 in.	0.293	7.441
8 mm	0.295	7.500
9 mm	0.332	8.438
3/8 in.	0.352	8.930
10 mm	0.369	9.375

11 mm	0.406	10.31
7/16 in.	0.410	10.42
12 mm	0.443	11.25
1/2 in.	0.469	11.91
13 mm	0.480	12.19
14 mm	0.517	13.13
9/16 in.	0.527	13.39
15 mm	0.554	14.06
5/8 in.	0.586	14.88
16 mm	0.591	15.00
11/16 in.	0.645	16.37
18 mm	0.664	16.88
19 mm	0.701	17.81
3/4 in.	0.703	17.86
20 mm	0.738	18.75
13/16 in.	0.762	19.35
22 mm	0.812	20.63
7/8 in.	0.820	20.84
15/16 in.	0.879	22.32
1 in.	0.938	23.81
1 1/8 in.	1.055	26.79
1 1/4 in.	1.172	29.77
1 3/8 in.	1.289	32.74
1 1/2 in.	1.406	35.72

NOTES Table 8.11.2.1.3(cc)(3):

1. 1 in. = 25.4 mm
2. If an exact nominal rope size is not listed, the maximum reduction allowed before replacement shall be 3.125% for ropes under 8 mm and 6.250% for ropes 8 mm and larger.

28. **8.11.2.1.3 (jj)** (Periodic Inspections and Tests). Add the following new requirement (jj): "(jj) Elastomeric coated steel belts shall be replaced when the elastomeric coating is worn or damaged permitting the load carrying strands to be worn or damaged, or when the residual strength of the elastomeric coated steel belt is reduced to 60% or less of its rated breaking strength."

ARTICLE 9. REFERENCE CODES, STANDARDS AND SPECIFICATIONS

18-30-110 Part 9 of ASME–Adopted without modification.

The provisions of Part 9 of ASME are adopted by reference and shall apply without modification.

ARTICLE 10. FIGURES

18-30-120 Figures of ASME–Adopted without modification.

The Figures of ASME are adopted by reference and shall apply without modification.

ARTICLE 11. TABLES

18-30-130 Tables of ASME–Adopted with modifications.

Except as otherwise provided in this chapter, the Tables of ASME are adopted by reference and shall apply without modification.

ARTICLE 12. APPENDICES

18-30-140 Appendices of ASME–Adopted with modifications.

The nonmandatory appendices of ASME are adopted by reference and shall be recognized as mandatory with the following modification:

1. **Appendix N** (Recommended Inspection and Test Intervals in "Months"). Revise to read: "Inspection and test intervals shall be established by the building commissioner, who shall consider, but shall not be bound to follow, the recommendations contained in Appendix N of ASME."

ARTICLE 13. EXISTING ELEVATORS AND ESCALATORS

18-30-150 Preface of ASME EI–Adopted without modification.

The Preface of ASME EI is adopted by reference and shall apply without modification, and shall only apply upon an alteration of the installation. See 8.7 of ASME.

18-30-160 Part 1 of ASME EI–Introduction–Adopted with modifications.

The provisions of Part I of ASME EI are adopted by reference and shall apply with the following modifications:

1. **Section 1.2** (Application of Code). Revise to read: "There are specific requirements for existing installations in the Municipal Code of Chicago that could differ from those found in the latest or previous editions of ASME A17.1, *Safety Code for Elevators and Escalators.* Existing installations, at a minimum, shall meet the requirements of the Municipal Code of Chicago in effect at the time the installation was installed or altered, plus all of the requirements set forth in Article 14 of this Ordinance. If an existing installation does not meet the requirements of the Municipal Code of Chicago as set forth in this Ordinance, the

existing installation shall be brought into compliance with such requirements upon any alteration to the existing installation that occurs after the effective date of this Ordinance. See 8.7 of ASME.

Existing installations shall also meet the following requirements set forth in ASME A17.1, *Safety Code for Elevators and Escalators*:

(a) Section 8.1, Security.

(b) Section 8.6, Maintenance, Repair, and Replacement.

(c) Section 8.7, Alterations. Alterations, if made, shall conform to the applicable requirements of this Section 8.7 as modified by the Municipal Code of Chicago.

(d) Section 8.9, Code Data Plate.

(e) Section 8.10, Acceptance Inspections and Tests. Altered equipment shall comply with the applicable inspection and test requirements of this Section 8.10 as modified by the Municipal Code of Chicago.

(f) Section 8.11, Periodic Inspections and Tests."

18-30-170 Part II of ASME EI–Hoistways and related construction for electric elevators–Adopted without modification.

The provisions of Part II of ASME EI are adopted by reference and shall apply without modification.

18-30-180 Part III of ASME EI–Machinery and equipment for electric elevators–Adopted with modifications.

The provisions of Part III of ASME EI are adopted by reference and shall apply with the following modifications:

1. **Section 3.4.3(c)** (Location of Car Doors and Gates: Space Guards). Revise to read: "Where existing elevators with horizontally swinging doors conform to 18-30-290, no change is required. For non-conforming elevators, where existing distances are greater than specified by 3.4.3(a) and (b), a space guard (pan) of sheet metal shall be provided, attached to the hoistway door and/or car door. The guard (pan) is to be mounted to the door by a tamper-proof means. The bottom of the guard (pan) shall be not less than 0.125 in. (3.2 mm) nor more than 0.75 in. (19 mm) from the edge of the sill and shall be not more than 0.5 in. (13 mm) above the sill. The guard (pan) shall cover the entire hoistway side of the hoistway door, excluding the area required for the interlock, and shall be provided with a vision panel. The guard shall extend the full width of the door. Exposed

edges shall be beveled or rolled to eliminate sharp edges. The guard shall be sufficiently rigid or reinforced to prevent collapsing or denting. Mounting of the guard shall have proper clearances at the bottom, top, and sides to permit easy closing of the door and shall not interfere with the self closing. On multi-section horizontally sliding doors only the leading or fast panel shall be fitted with the space guard. The sides of the guard shall be closed. All such existing swing-type hoistway doors shall be without hand-operated latches or other hand-operated door fastening devices, or pull rings and similar devices that may entrap hands or fingers."

2. **3.11.3** (Firefighters' Service). Delete this requirement.

18-30-190 Part IV of ASME EI–Hydraulic elevators–Adopted with modification.

The provisions of Part IV of ASME EI are adopted by reference and shall apply with the following modification:

1. **Section 4.3.3** (Hydraulic Elevators) Delete this section in its entirety. Refer to ASME 8.6.5.8 for requirements.

18-30-200 Part V of ASME EI–Escalators–Adopted without modification.

The provisions of Part V of ASME EI are adopted by reference and shall apply without modification.

18-30-210 Part VI of ASME EI–Dumbwaiters–Adopted without modification.

The provisions of Part VI of ASME EI are adopted by reference and shall apply without modification.

18-30-220 Part VII of ASME EI–Hand elevators–Adopted without modification.

The provisions of Part VII of ASME EI are adopted by reference and shall apply without modification.

18-30-230 Part VIII of ASME EI–Sidewalk elevators–Adopted without modification.

The provisions of Part VIII of ASME EI are adopted by reference and shall apply without modification.

18-30-240 Part IX of ASME EI–Moving walks–Adopted without modification.

The provisions of Part IX of ASME EI are adopted by reference and shall apply without modification.

18-30-250 Part X of ASME EI–Private residence elevators–Adopted without modification.

The provisions of Part X of ASME EI are adopted by reference and shall apply without modification.

18-30-260 Nonmandatory Appendices of ASME EI–Adopted as mandatory–Adopted with modifications.

The appendices of ASME EI are adopted by reference, shall be deemed to be mandatory

appendices, and shall apply with the following modifications:

1. Appendix A, Figure A3 (Typical Hoistway Door Space Guard). Delete the words "60 deg to 75 deg." Revise "not less than 40 in." to read: "Full height of hoistway door with clearance no greater than 2 in. at the top to allow the door to close." Add a note to read: "Vision panel to match existing vision panel in hoistway door."

2. Appendix C. Delete Appendix C in its entirety.

ARTICLE 14. ADDITIONAL REQUIREMENTS FOR EXISTING ELEVATORS AND ESCALATORS

18-30-270 Referenced standards.

If differences occur between the provisions of Article 13 of this chapter and the provisions of Article 14 of this chapter, the provisions of Article 14 shall apply.

18-30-280 Hoistway door interlocks.

Every existing power elevator shall be equipped with hoistway door interlocks which shall comply with the provisions of this code.

18-30-290 Location of elevator doors.

On and after September 1, 1967, all existing swing-type hoistway doors used in conjunction with the car gates or car doors on automatic or continuous pressure operating elevators shall comply with 2.14.4.5 of ASME. The addition of a guard (pan) covering the entire hoistway side of the hoistway door, excluding the area required for the interlock, shall be permitted to satisfy this requirement. Such car gates are not to be set back further than 50 mm (2 in.) from the edge of the car sill. All such existing swing-type hoistway doors shall be without hand-operated latches or other hand-operated door fastening devices, or pull rings and similar devices that may entrap hands or fingers.

18-30-300 Restricted opening of hoistway doors and car doors of passenger elevators.

All existing passenger elevators shall either (1) conform to 2.12.5 of ASME, or (2) the platform guard facing the landing openings shall extend a total distance below the platform of the height of tallest entrance less 600 mm (24 in.) and shall meet the strength requirements of 2.15.9 of ASME.

For purposes of this section, the "unlocking zone" is defined as a zone extending from the landing floor level to a point not less than 75 mm (3 in.) nor more than 450 mm (18 in.) above and below the landing.

18-30-310 Elevator identification.

Every elevator car in every building subject to the requirements of Chapter 13-78 of this code shall be permanently marked to correspond with the location of the elevator within the

building in relation to the building's floor plan. Such marking shall be located within each car near the fireman's keyed control, in contrasting-color lettering no less than 6 mm (0.25 in.) in height. Such marking shall also be posted adjacent to or on every elevator entrance on every floor in contrasting-color lettering no less than 25 mm (1.0 in.) in height. Provided, however, that on the designated level, the height of the lettering shall conform to 2.29.1(i) of ASME.

18-30-320 Existing Elevators–Firefighters' Emergency Operation - Effective Dates.

On or before January 1, 2015, all elevators with Phase II Emergency In-Car Operation shall either comply with

(1) all of the requirements set forth in 2.27.3 through 2.27.8 of ASME, as modified by items (46) through (60) of Article II of this chapter; or

(2) all of the applicable requirements of the Chicago Building Code in existence at the time the existing elevator was equipped or required to be equipped with Firefighters' Emergency Operation and all of the requirements set forth in section 18-30-2610 of the Chicago Building Code adopted on January 10, 2001, and appearing in the *Journal of Council Proceedings* on page 50236 of that date.

Provided, however, that if, at the time an existing elevator was installed or altered, the Chicago Municipal Code did not require that such existing elevator be equipped with a fire alarm initiating device, nothing in this Section 18-30-320 or in Section 18-30-2610 of the Chicago Building Code adopted on January 10, 2001, as referenced in item (2) of this section, shall be construed to require the installation of a fire alarm initiating device in such existing elevator until such time that an alteration is made to such existing elevator where ASME 8.7 requires a fire alarm initiating device to be installed.

ARTICLE 15. HEALTH CARE FACILITIES

18-30-330 Health care facilities–Referenced standards.

The provisions of this Article 15 shall apply to all health care facilities licensed or required to be licensed by the Illinois Department of Public Health. If a conflict occurs between the provisions of Article 15 of this chapter and the provisions of any other Article of this chapter, the provisions of Article 15 shall apply.

18-30-340 Sprinklers.

1. Sprinklers shall not be permitted at the top of any elevator hoistway where the hoistway is of 2-hour or greater rated construction with 1½ hour rated entrances.

2. When any alteration is made to a hydraulic elevator, sprinkler(s) shall be provided in the pit. The sprinklers shall be of the side wall type and shall be mounted no more than two feet above the pit floor.

3. All new elevators, whether traction, hydraulic or other driving machines, shall be provided with sprinklers in their pits. The sprinklers shall be of the side wall type and shall be mounted no more than two feet above the pit floor. (Also see NFPA-13).

4. Sprinklers shall not be permitted in any elevator machine room that is of 2-hour or greater rated construction and contains only elevator equipment or any other equipment exclusively related to the operation of the elevators. (Also see ASME 2.8.2).

18-30-350 Hoistway venting.

Venting of hoistways is not required.

18-30-360 Fire alarm initiating devices.

1. No fire alarm initiating device shall be installed at the top of any elevator hoistway unless the hoistway has a sprinkler installed at the top. If an elevator hoistway has a sprinkler installed at the top and it is prohibited to remove and cap the sprinkler line, fire alarm initiating devices shall be installed and shall operate in accordance with NFPA-72.

2. Fire alarm initiating devices shall not be permitted to be installed in the pits of any elevator hoistway.

18-30-370 Firefighters' Emergency Operations.

Health care facilities licensed or required to be licensed by the Illinois Department of Public Health shall comply with all of the requirements set forth in Section 2.27 of ASME, as modified by items (46) through (60) of Article II of this chapter, except as otherwise provided in this section:

1. **2.27.3.2** (Phase I Emergency Recall Operation by Fire Alarm Initiating Devices). Add the following requirement: "The activation of any of the required fire alarm initiating devices in any elevator lobby or machine room shall initiate Phase I Emergency Recall Operation of the elevators serving that lobby or any associated elevators of a group automatic operation or any elevators whose machinery is located in the same machine room. Activation of Phase I Emergency Recall Operation by water flow switches shall not be permitted. Elevators that serve the same floor of the building but are separated by an approved fire and smoke separation shall not be required to initiate Phase I Emergency Recall Operation."

2. **2.27.5.3** (Firefighters' Emergency Operation: Automatic Elevators with Designated-Attendant Operation). Revise to read: "When an elevator is on Hospital Service (Code Blue), the elevator shall conform to 2.27.5.3. Any elevator on Phase I or Phase II shall not be placed on Hospital Service (Code Blue)."

ARTICLE 16. PLATFORM LIFTS AND STAIRWAY CHAIR LIFTS

18-30-380 ASME A18.1–Adopted with modifications.

The provisions of ASME A18.1 are adopted by reference and shall apply with the following modifications:

1. Vertical platform lifts shall have full runway enclosure below the top landing.

2. The doors and gates providing entrance to the runway of a vertical platform lift shall be protected with hoistway door interlocks meeting the requirements of 2.12.2 and 2.12.4 of ASME.

3. All platform lifts and stairway chair lifts shall be subject to inspection at the time of installation.

4. Platform lifts and stairway chairlifts that are not installed in a single private residence shall be subject to routine and periodic inspections and tests at a frequency set by the building commissioner.

5. Upon request by the owner or resident of the single private residence, platform lifts and stairway chairlifts installed in single private residence may be inspected by the department of buildings if departmental resources permit and upon advance payment of a $100.00 inspection fee. If the device passes the inspection and tests, the building commissioner shall cause a certificate to be issued stating that the device passed all inspections and tests. The certificate shall be valid for one year.

ARTICLE 17. VERTICAL RECIPROCATING CONVEYORS AND RELATED EQUIPMENT

18-30-390 ASME B20.1-2003–Adopted with modifications.

The provisions of ASME B20.1-2003 are adopted by reference and shall apply to vertical reciprocating conveyors and related equipment with the following modifications:

1. Vertical reciprocating equipment shall be installed in a full hoistway (runway) enclosure. Entrances to the hoistway (runway) shall be protected with doors or gates having a fire-resistance rating meeting the requirements of the Chicago Building Code applicable to the construction type of the door or gate.

2. All doors and gates providing entrance to the hoistway (runway) of a vertical reciprocating conveyor shall be protected with hoistway door interlocks meeting the requirements of 2.12.2 and 2.12.4 of ASME.

3. All vertical reciprocating conveyors shall be inspected by the department of buildings at the time of installation for compliance with the requirements of this chapter. Thereafter, inspections shall be conducted at a frequency established by the building commissioner pursuant to duly promulgated rules and regulations.

ARTICLE 18. FEES AND INSPECTIONS

18-30-400 Testing fees.

The building commissioner is authorized to conduct or to cause to be conducted any reasonable test necessary to determine whether any equipment regulated by this chapter complies with the requirements of this chapter, and to assess a fee to cover any costs associated with the performance of such test. Such test shall be conducted at the expense of the person responsible for the equipment as set forth in section 18-30-005.

18-30-405 Permit fees.

If a permit is required for any equipment regulated under this chapter, the fee for such permit shall be as set forth in section 13-32-310.

18-30-410 Inspection fees.

The fee for any inspection conducted pursuant to this chapter shall be as set forth in section 13-20-140.

18-30-415 Initial acceptance inspection – Duty to pretest equipment prior to inspection – Reinspection fee.

(a) If a permit is required for any equipment regulated under this chapter, the person responsible for such equipment, as set forth in section 18-30-005, shall pre-test such equipment in advance of any initial acceptance inspection to ensure that such equipment is fully operational at the time of inspection. If the pre-test indicates that the equipment will not be fully operational at the time the initial acceptance inspection is scheduled to occur, the person responsible for the equipment shall, at least two business days in advance of the scheduled initial acceptance inspection, cancel such scheduled inspection.

(b) The fee for any second or subsequent reinspection necessitated by reason of a permit applicant's failure to comply with the requirements set forth in subsection (a) of this section shall be twice the applicable amount set forth in section 13-20-140 or $100.00, whichever is greater. Provided, however, that no reinspection fee shall be required if a reinspection is necessary due to an error made by the city. The cost of the first reinspection shall be incorporated into the initial inspection fee.

18-30-420 Annual or periodic inspection - Reinspection fee.

Except as otherwise provided in subsection (b) of Section 13-20-140, if any equipment regulated under this chapter fails to pass any annual or periodic inspection required under this code, the fee for reinspection of such equipment shall be $100.00. The reinspection fee shall also be assessed whenever any scheduled inspection cannot take place due to the absence of the

building's owner, agent, lessee or occupant or any other action or inaction by the building's owner, agent, lessee or occupant. Provided, however, that no reinspection fee shall be required if a reinspection is necessary due to an error made by the city.

ARTICLE 19. ENFORCEMENT

18-30-430 Violation–Penalty.

(a) Except as otherwise provided in this chapter, any person who violates any of the requirements of this chapter shall be fined not less than $200.00 nor more than $500.00 for each offense. Each day that a violation continues shall constitute a separate and distinct offense to which a separate fine shall apply.

18-30-440 Accidents–Reporting required.

If any equipment regulated by this chapter is involved in any accident that results in an injury to or the death of any person, or in property damage to an apparent extent of $1,000.00 or more, the accident shall be reported within 24 hours of its occurrence to the department of buildings by the person responsible for such equipment as set forth in section 18-30-005. The equipment involved in the accident shall not be operated until

(1) the commissioner of buildings or his designee examines the equipment to determine whether the accident was caused by any defect in the equipment and files a written report with the department of buildings summarizing the findings of the examination; and

(2) the person responsible for the equipment as defined in section 18-30-005 obtains a permit as required and corrects any defect in the equipment identified in the written report submitted pursuant to item (1) of this section; and

(3) the equipment passes an inspection by the department of buildings; and

(4) all required permit, testing, inspection and reinspection fees have been paid.

18-30-450 Order to cease operation of unsafe equipment.

The building commissioner is authorized to order the operation of unsafe elevators, escalators, platform lifts or any other equipment regulated by this chapter to be stopped in accordance with the requirements of section 13-20-130. Any person who violates any such order shall be subject to the penalties set forth in section 13-20-130.

18-30-460 Rules and regulations.

The building commissioner shall have the authority to promulgate rules and regulations necessary to implement the requirements of this chapter.

SECTION 2. Chapter 18-36 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and, by inserting, under the heading identified, the standard reference number and title underscored, as follows:

18-36-010 Reference standards.

This chapter lists the edition date and full title of standards that are referenced in other sections of the building code.

(Omitted text is unaffected by this ordinance)

ASME American Society of Mechanical Engineers
Three Park Avenue
New York, NY 10016-5990

Standard Reference Number	**Title**
~~A17.1-04~~ A17.1-07/CSA B44-07	Safety Code for Elevators and Escalators
A17.7-07/CSA B44.7-07	Performance Based Safety Code for Elevators and Escalators
A17.2-04	Guide for Inspection of Elevators, Escalators, and Moving Walks
A17.3-05	Safety Code for Existing Elevators and Escalators
A18.1-03	Safety Standard for Platform Lifts and Stairway Chairlifts
B20.1-03	Safety Standard for Conveyors and Related Equipment

(*Omitted text is unaffected by this ordinance)*

SECTION 3. Section 4-298-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

4-298-010 Elevator mechanic contractor defined.

"Elevator mechanic contractor" means any person, firm or corporation engaged in the business of constructing, installing, altering or maintaining the mechanical components of any elevator, escalator, moving walk, dumbwaiter, platform lift, manlift, inclined lift in private residences, ~~mechanical amusement device,~~ mechanical equipment used for the raising or ~~lowing~~ lowering of any curtain, stage or orchestra floor, or any other device specifically covered and described within ~~chapter 13-156~~ Chapter 18-30 of the Chicago Municipal Code.

SECTION 4. Section 4-298-070 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

4-298-070 Duties.

The supervising elevator mechanic shall perform the work or supervise and direct the mechanical construction, installation, alteration or maintenance of elevators and related devices listed in Section 4-298-010 authorized by permits issued under the authority of this chapter. All applications for permits shall be countersigned by said supervising elevator mechanic or by a State of Illinois licensed elevator contractor. Applications for permits which may also include the installation, alteration or maintenance of related electrical wiring and equipment for power, control or communication, shall also be countersigned by a supervising electrician ~~in conformance with the provisions of Sections 14-12-200 through 14-12-270 of the Chicago municipal code~~.

SECTION 5. Section 13-20-051 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-20-051 Reinspection fee.

~~Whenever~~ Except as otherwise provided in this code, whenever the department of buildings conducts a third or subsequent inspection following an initial and one follow-up inspection of a building to verify code compliance, the commissioner of buildings is authorized to assess a reinspection fee of $100.00 against the building's owner, agent, lessee or occupant, except where the subsequent inspection is necessary due to an error made by the city. The reinspection fee shall also be assessed whenever any scheduled inspection cannot take place ~~because of~~ due to the absence of~~, or other action or inaction by,~~ the building's owner, agent, lessee or occupant or any other action or inaction by the building's owner, agent, lessee or occupant. The reinspection fee shall be paid to the director of revenue.

SECTION 6. Section 13-20-100 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-20-100 Elevators, escalators and moveable platforms – Inspection required.

Every elevator, moving walk, material lift, stairway chairlift, vertical reciprocating conveyor, movable stage, movable orchestra floor, platform lift, or escalator now in operation, or which may hereafter be installed, together with the hoistway and all equipment thereof, shall be inspected under ~~and by~~ the authority or pursuant to the mandate of the building commissioner ~~at least once every 12 months and~~ as often as deemed necessary by the building commissioner based on a risk assessment, and in no case shall any new equipment be placed in operation until

an initial acceptance inspection of the same has been made. It shall be the duty of every owner, agent, lessee, person responsible for the equipment within the meaning of section 18-30-005 or occupant of any building wherein any such equipment is installed, and of the person in charge or control of any such equipment, to permit the making of a test and inspection of such elevator, or escalator, or other equipment set forth in this section and all devices used in connection therewith upon demand being made by the building commissioner or by his authorized elevator inspector within five days after such demand has been made.

SECTION 7. Section 13-20-110 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-20-110 Elevators, escalators and movable platforms – Certificate of compliance – Posting – Alteration or defacement of certificate prohibited – Penalty.

(a) Whenever any elevator, moving walk, material lift, vertical reciprocating conveyor, movable stage, movable orchestra floor, platform lift, or escalator has been inspected under the authority or pursuant to the mandate of the building commissioner and the tests herein required shall have been made of all safety devices with which such equipment is required to be equipped and the result of such inspection and tests show such equipment to be in good condition, and that such safety devices are in good working condition and in good repair, it shall be the duty of the building commissioner to issue or cause to be issued a certificate setting forth the result of such inspection and tests and containing the date of inspection, the weight which such equipment will safely carry and a statement to the effect that the shaft doors, hoistway, and all equipment, including safety devices, comply with all applicable provisions of Chapter 18-30 of this Code, upon the payment of the inspection fee required by the provisions of this Code. It shall be the joint and several duty of the owner, agent, lessee, or occupant of the building in which such equipment is located and of each person in charge or control of ~~such equipment~~ any elevator to frame ~~the~~ such certificate and to place ~~the same~~ such framed certificate in a conspicuous place in ~~each~~ the elevator to which the certificate applies ~~and near each movable stage, movable orchestra floor, platform lift, or elevator~~. Certificates issued under this section for any moving walk, material lift, stairway chairlift, vertical reciprocating conveyor, movable stage, movable orchestra floor, platform lift, or escalator shall be kept on site by the owner, agent, lessee, occupant or person in charge or control of such equipment and, upon request by a city inspector or other authorized person, shall be made available for inspection by such city inspector or other authorized person. The words "safe condition" in this section shall mean that it is safe for any load up to the approved weight named in such certificate.

(b) It shall be unlawful for any person to alter, deface, modify or duplicate, or to cause to be altered, defaced, modified or duplicated, any certificate issued or caused to be issued by the building commissioner under subsection (a) of this section. Any person who violates any requirement of this subsection shall be fined not less than $2,000.00 nor more than $5,000.00 for each offense.

(c) It shall be the duty of the person responsible for any of the equipment set forth in subsection (a) of this section to immediately notify the building commissioner if any certificate issued or caused to be issued by the building commissioner under subsection (a) of this section has been altered, defaced, modified or duplicated in any way. Any person who violates any requirement of this subsection shall be fined not less than $2,000.00 and not more than $5,000.00 for each offense. Each day that a violation continues shall constitute a separate and distinct offense to which a separate fine shall apply. For purposes of this subsection (c), the term "person responsible for the equipment" shall have the meaning set forth in section 18-30-005.

SECTION 8. Section 13-20-120 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-20-120 Elevators, escalators and movable platforms – Noncompliance.

Where the result of such inspection or tests shall show that ~~such~~ any elevator, moving walk, material lift, vertical reciprocating conveyor, movable stage, movable orchestra floor, platform lift, or escalator is in an unsafe condition or in bad repair, or shall show that any of the safety devices, which are required by the provisions of Chapter 18-30 of this Code, have not been installed or if installed, are not in good working order or not in good repair, such certificate shall not be issued until such elevator, its hoistway, and its equipment, or such moving walk, material lift, vertical reciprocating conveyor, movable stage, movable orchestra floor, platform lift, or escalator, or such device or devices have been put in good working order.

SECTION 9. Section 13-20-130 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-20-130 Elevators, escalators and movable platforms – Unsafe condition – Power of commission to stop operation – Penalty for violation of order.

(a) Whenever any elevator inspector finds any elevator, its equipment and hatchway, including doors, or any escalator, moving walk, material lift, stairway chairlift, vertical reciprocating conveyor, movable stage, movable orchestra floor, ~~or~~ platform lift, mechanical amusement riding devices or any other equipment regulated under this code in an unsafe condition, he shall immediately report the same to the elevator inspector in charge, who shall report it to the building commissioner, together with a statement of all the facts relating to the condition of such equipment. It shall be the duty of the building commissioner, upon receiving from the elevator inspector in charge a report of the unsafe condition of such equipment and hatchway, including doors, to order the operation of such equipment to be stopped and to remain inoperative until it has been placed in a safe condition. ~~and it~~

(b) It shall be unlawful for any agent, owner, lessee, person responsible for the equipment

within the meaning of section 18-30-005, ~~or~~ occupant of any building wherein any such equipment is located~~;~~ or any other person to violate any order to cease operation of unsafe equipment issued by the building commissioner under this section, or to permit or allow ~~the same~~ any equipment identified in such order to be used or to remain in use or to be placed back into operation, after the receipt of a notice from the building commissioner, which notice is in writing, that such equipment is in an unsafe condition.~~ and~~ The prohibitions set forth in this subsection (b) shall remain in effect until ~~it~~ such time that the building commissioner determines that the unsafe equipment identified in the order or notice has been restored to a safe and proper condition as required by the provisions of this Code and the order to cease operation of the equipment is lifted or otherwise released by the building commissioner. Any person who violates any requirement of this subsection shall be fined not less than $10,000.00 and not more than $50,000.00 for each offense. Each day that a violation continues shall constitute a separate and distinct offense to which a separate fine shall apply. In addition to the fine prescribed in this subsection, any person who violates any requirement of this subsection where such violation results in the death or injury of any person shall be subject to a term of imprisonment for a period of not less than 7 days and not more than 6 months under the procedures set forth in Section 1.2-1.1 of the Illinois Municipal Code, as amended, and under the provisions of the Illinois Code of Criminal Procedure, as amended.

SECTION 10. Section 13-20-140 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-20-140 Elevators, escalators and movable platforms – Inspection fee.

(a) The building commissioner is authorized to, and shall assess, the following inspection ~~fee~~ fees for ~~an~~ any annual or other periodic inspection ~~under Section 13-20-100 of an elevator or manlift, moveable stage or orchestra floor or platform lift, or escalator shall be~~ of the following equipment:

For an elevator, vertical reciprocating conveyor or manlift ten floors or less ... $105.00

For an elevator or vertical reciprocating conveyor ~~or manlift~~ above ten floors but less than 21 floors ...125.00

For an elevator or vertical reciprocating conveyor ~~or manlift~~ over 20 but less than 31 floors ...140.00

For an elevator or vertical reciprocating conveyor ~~or manlift~~ over 30 floors ... 155.00

Skip stops shall be considered as a floor of the building. ~~escalator ... 75.00~~

For an escalator or moving walk ... 75.00

Movable stage or orchestra floor ... 125.00

Platform lift ... 75.00

Hinged platform lift for trucks and loading docks ... 45.00

Material lifts ... 105.00

Platform wheel chair lifts, inclined wheel chair lifts and stairway chairlifts ... 50.00

(b) Whenever the department of buildings must conduct a reinspection of a movable stage or orchestra floor, the commissioner of buildings is authorized to assess ~~the~~ a reinspection fee ~~set forth in Section 13-20-051~~ of $100.00 against the building's owner, agent, lessee or occupant. Whenever the department of buildings must conduct a reinspection of any equipment regulated under Chapter 18-30 of this Code other than a movable stage or orchestra floor, the reinspection fee set forth in section 18-30-415 or 18-30-420, as applicable, shall apply.

SECTION 11. Section 13-64-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-64-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a residential unit as defined in Section 13-56-020 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to buildings, including, but not limited to, the following:

(Omitted text is unaffected by this ordinance)

Chapter ~~13-156~~ 18-30 Elevators.

(Omitted text is unaffected by this ordinance)

SECTION 12. Section 13-68-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-68-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purpose of a business unit as defined in Section 13-56-120 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to

buildings, including, but not limited, to the following:

(Omitted text is unaffected by this ordinance)

Chapter ~~13-156~~ 18-30 Elevators.

(Omitted text is unaffected by this ordinance)

SECTION 13. Section 13-76-130 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-76-130 Fire department emergency access elevator.

At least one elevator is to be provided for fire department emergency access to all floors of a building. All elevators shall be equipped with firemen's control ~~as required in Section 13-156-460~~ in accordance with the requirements set forth in items (46) through (60), inclusive, of Section 18-30-040, or in Section 18-30-320, or in Section 18-30-370, as applicable.

SECTION 14. Section 13-80-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-80-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an institutional unit as defined in Section 13-56-050 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to buildings, including, but not limited to the following:

(Omitted text is unaffected by this ordinance)

Chapter ~~13-156~~ 18-30 Elevators.

(*Omitted text is unaffected by this ordinance)*

SECTION 15. Section 13-84-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-84-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an assembly unit as defined in Section 13-56-070 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to buildings, including, but not limited to, the following:

(*Omitted text is unaffected by this ordinance)*

Chapter ~~13-156~~ 18-30 Elevators.

(Omitted text is unaffected by this ordinance)

SECTION 16. Section 13-88-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-88-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an open air assembly unit as defined in Section 13-56-110 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to buildings, including, but not limited to, the following:

(Omitted text is unaffected by this ordinance)

Chapter ~~13-156~~ 18-30 Elevators.

(Omitted text is unaffected by this ordinance)

SECTION 17. Section 13-100-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-100-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a mercantile unit as defined in Section 13-56-130 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to buildings, including, but not limited to, the following:

(Omitted text is unaffected by this ordinance)

Chapter ~~13-156~~ 18-30 Elevators.

(Omitted text is unaffected by this ordinance)

SECTION 18. Section 13-104-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-104-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an industrial unit as defined in Section 13-56-140 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to buildings, including, but not limited to, the following:

(Omitted text is unaffected by this ordinance)

Chapter ~~13-156~~ 18-30 Elevators.

(Omitted text is unaffected by this ordinance)

SECTION 19. Section 13-108-010 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-108-010 General requirements.

Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a storage unit as defined in Section 13-56-170 shall comply with the special provisions of this chapter and also with the general provisions of this Code pertaining to buildings, including, but not limited to, the following:

(Omitted text is unaffected by this ordinance)

Chapter ~~13-156~~ 18-30 Elevators.

(Omitted text is unaffected by this ordinance)

SECTION 20. Section 13-160-520 of the Municipal Code of the City of Chicago is hereby amended by deleting the language stricken through and by inserting the language underscored, as follows:

13-160-520 Escalators.

Escalators serving as a required means of exit shall comply with the requirements of Chapter ~~13-156~~ 18-30 and with the requirements of Sections 13-160-530 to 13-160-570, inclusive.

SECTION 21. Title 18 of the Municipal Code of the City of Chicago is hereby amended by inserting a new Chapter 18-31, as follows:

Chapter 18-31

Stage and Orchestra Lifts, Permanent Window Washer Power-Operated Platforms, Mechanical Amusement Riding Devices, Manlifts and Adjustable Loading Platforms

ARTICLE I. GENERAL REQUIREMENTS.

18-30-001 Applicability.

The following persons shall comply with the requirements of this chapter: the owner of the equipment, the equipment owner's agent, the lessor of the equipment and any person charged with managing, controlling or caring for the equipment.

ARTICLE II. STAGE AND ORCHESTRA LIFTS

18-31-010 Elevators of special character.

Stage, orchestra and other elevators of special character shall comply with all the requirements for elevators which are applicable to the type of equipment used and for the purpose for which the elevator is installed. Tests and inspection shall cover also all additional equipment and accessories necessary for their full operation.

18-31-015 Permit and inspection requirements.

Any equipment governed under this Article III shall be permitted and receive an initial acceptance inspection upon installation and before operation. The permit fee shall be as set forth in section 13-32-310.

ARTICLE III: PERMANENT WINDOW WASHER POWER-OPERATED PLATFORMS

18-31-020 Window washer power-operated platforms of a permanent type.

Permanent window washing platforms shall comply with all the requirements of Chapter

18-31 of the Municipal Code of Chicago for elevators which are applicable to the type of equipment used and for the purpose for which the equipment is installed; also all additional parts and accessories necessary for their full operation.

(a) Plans and drawings shall be submitted for permit and shall be certified by a licensed architect or structural engineer, licensed to practice by the state of Illinois, in accordance with Section 13-40-010 of this code.

(b) In cases of practical installation difficulty or new developments, exceptions for the literal requirements of the installation may be granted by the building commissioner to permit the use of other devices or methods, but only when it is clearly evident that equivalent protection is thereby secured.

(c) Application for permit shall comply with Section 13-32-190, and shall be inspected in accordance with Sections 13-20-100 and 13-20-140 of this code.

(d) Raising or lowering of the platform shall be power-operated by overhead machinery.

(e) All wiring shall be done to conform with the requirements of the electrical provisions of the Chicago Electrical Code as it applied for outdoor installation.

(f) *Roof Machinery.*

(1) Roof machinery cars shall have a counterweight stabilizing factor of at least three to one when platform is at lowest point of travel.

(2) There shall be removable inspection plates on the worm gear housing for the purpose of inspecting the worm and gear. One plate shall be mounted adjacent to the mesh of the worm and gear, and one at the top of the gear housing.

(3) All machines shall be of winding drum type, arranged so that only one layer of wire rope is permitted. The drums shall be of cast iron or steel and have spiral finished U-grooves properly spaced for the cable size used. The worms, worm gear and spur gears shall have machine cut teeth. Cast iron for gearing material shall not be permitted. Tight fitting keys or splines shall be used for all connections subject to torque or tension. Only direct or geared couplings shall be provided between the speed reduction unit and hoisting drum.

(4) A primary brake shall be provided for normal stopping and holding of the platform. The primary brake shall be part of the driving machine assembly.

(5) A governor operated secondary brake shall be installed in addition to the primary brake. The governor operated secondary brake shall be one of the following types:

(a) Direct applied show brake either externally or internally consisting

of two brake arms carrying pivoted brake shoes with suitable flexible brake lining and arranged to apply directly upon the drum or substantial integral extensions of the drum.

(b) A self-energizing band brake, externally applied to the drum or substantial integral extensions of the drum. The brake shall be constructed of high tensile steel band and lined with suitable flexible brake lining.

(c) A geared brake employing mechanisms which are wholly independent of the main service drive. The brake shall be of the brake shoe type, the main drum gear shall be directly attached to the drum through body fitted bolts. If an auxiliary drum gear is used in connection with the secondary geared brake, it shall also be directly attached to the drum through body fitted bolts. The geared brake may be applied to the main service drum gear providing this gear is of heavy duty construction with the American Gear Manufacturers Association publication A.G.M.A. 440.03 June, 1959, service factor of not less than 1.5 under conditions of maximum braking effect.

(6) Both the primary and secondary brakes shall be magnetically operated and spring set. Both brakes shall be arranged to operate on every stopping operation. In addition, the governor shall cause the secondary brake to set at 25 percent over speed independent of normal stopping devices. Each brake shall be capable of stopping and holding the rated load.

(7) All parts of the primary brake and of the secondary brake are to be readily accessible for the inspection and adjustment and shall be completely weather protected so that their function will be substantially the same under all weather conditions.

(8) A governor test shall be made with a capacity load on the platform to determine whether the secondary brake will stop and hold the main drum in the event the drum exceeds 25 percent above the rated speed.

(9) The diameter of drums and sheaves shall be 40 times the diameter of the hoisting ropes.

(10) All structural members shall have a minimum factor of safety of five. All other components of the hoisting machinery shall have a factor of safety, based on the total static load, of eight for wrought iron or wrought steel and 10 for cast iron, cast steel or other materials. Cast iron shall not be utilized in any load carrying capacity in the design of this equipment where it can be subjected to torsion, bending or tension.

(11) Safety factor for hoisting cables shall be not less than 10.

(12) The number and diameter of the cables shall be determined by using the required factor of safety and the rated ultimate strength of the cable. The computed load on the cables shall be the weight of the platform, plus its rated load, plus the weight of the hoisting cables. The minimum number of cables used shall be four. The minimum diameter of the cables shall be not less than 5/16's of an inch. Cables anchored to winding drums shall have not less

than two complete turns of each cable on the winding drum when the platform has reached the limit of its travel.

(13) Winding drum machine shall have final stopping switches on the machine. Normal top and bottom terminal switches shall be provided.

(14) On 3-phase AC installations, the stopping switches on the machine shall be so arranged as to open the main line circuits to the motor and brake.

(15) Slack cable switches attached to the platform hitch shall be provided for each individual cable.

(g) *Suspended Working Platform.*

(1) The suspended working platform shall be fabricated of steel or aluminum or alloy of these basic structural metals.

(2) Design of the working platform shall be of the girder or truss construction and shall be adequate to support its rated load with a safety factor of eight.

(3) Welding, riveting and bolting of the platform members shall be in accordance with accepted practices.

(4) Platforms shall be suitably guided and shall be stable through its entire operation from top or bottom or vice versa. Engaging guide rollers or guide shoes shall be so designed to compensate for variation in building contour. Guide shoe brackets or casting shall be of a material that will resist shear and tensile loading. Cast iron shall not be used.

(5) All parts used in the construction or operation of the platform shall be fabricated from material that will consistently withstand severe local weather extremes.

(6) Platforms shall have a minimum net width of 24 inches and shall be furnished with permanent guard rails 36 inches high in the front (building side) and on the sides and 42 inches high in the rear. Guard interstices shall be filled with metallic mesh or similar material and shall reject a ball of 1 inch in diameter. If the platform is confined in its operation to a distance not exceeding 12 inches from the building, the mesh may be omitted on the front side, but a 4-inch toe guard along the front side must be provided. The platform flooring shall be of the nonskid type, open grating, which will reject a half-inch ball.

(7) The platform shall be fastened to the cables by individual tapered babbitted sockets, and the cable sockets and method of socketing shall comply with the requirements of this chapter. Each shackle shall be arranged for individual adjustment for cable tension.

(h) *Ratings.*

(1) The rated speed of the platform shall not exceed 50 feet per minute in the down direction with a fully loaded platform and shall not be less than 80 percent of the rated speed in the up direction with the same load.

(2) The rated capacity of the platform shall not exceed 25 pounds per square foot of platform area. The area shall be measured between the protection guards or toe guard and sides (ends) of the platform. Each platform shall bear a manufacturer's rating plate stating the maximum permissible net load which shall be the sum of the allowable load of men, tools, materials.

(i) *Roof Car Operating Devices and Control Equipment*. The roof car shall be rigidly constructed to withstand the unbalanced forces to which it will be subjected, and shall move on steel tracks securely fastened to the building structure.

(1) If the roof car is not parked in a roof garage, it shall be fully enclosed to protect the operating equipment placed on it from all weather extremes.

(2) The roof car, when power operated, shall have a drive independent of the driving units used for the platform.

(3) The control shall include constant pressure means to move the roof car forward or reverse, and a separate stop switch shall be available at the operating station to prevent all motion.

(4) The roof car shall not be movable unless the platform is out of its guides and in proper position on the roof car.

(5) Electric contacts or switches shall be provided and fastened to the building structure or roof car rails to indicate when the roof car is locked in proper place for placing of the platform in its guide.

(6) A power disconnect switch shall be permanently placed in roof car.

(j) *Platform Operating Devices and Control Equipment*

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(1) The control for the vertical travel of the platform shall be of the push button type and it shall be necessary to maintain a constant pressure on the “up” or “down” control button for operation. In addition, an emergency stop switch shall be provided which shall be of the positive open and close type. The control station and stop switch shall be permanently secured to one side guard of the platform and connected to the control panel through suitable rubber covered control cables.

(2) Where the platform length exceeds 20 feet, an auxiliary control station shall be located at the opposite side guard of the platform. This control station shall include a

constant pressure type of “run” button which must be held closed while the platform is being moved.

(3) Communication equipment shall be provided for each powered platform for use in an emergency.

(4) All platform controls shall be so designed as to operate on a nominal voltage of 120.

(5) The controller for operation of the platform shall be installed in the roof car. It shall be fully enclosed for protection from the weather.

(6) Automatic tension control shall be provided for control cables attached to platforms. When the tension in the control cable exceeds a safe limit, electrical interlocking contacts shall remove power from the vertical traveling hoistway machines and brakes.

ARTICLE IV. MECHANICAL AMUSEMENT RIDING DEVICES

18-31-030 Mechanical amusement riding devices.

Mechanical amusement riding devices shall comply with the specific provisions of sections 18-31-040 through 18-31-080, inclusive.

18-31-040 Standards.

All mechanical amusement devices shall be built of the material hereinafter enumerated, or of other materials approved by the building commissioner, substantially constructed and designed to withstand shocks and to afford adequate protection for passengers riding thereon; structural features shall meet the requirements prescribed elsewhere in this code. Handrails, handles, safety straps or other protective devices of suitable design shall be provided in all cars of roller coasters, scenic railways, ferris wheels, ships and other riding, sliding, rotating and rolling devices of similar type. Each horse on a merry-go-round shall be equipped with a stirrup and a bridle, also a strap on the horse rod to snap or buckle under the arms of the rider.

Ferris wheels, except of the portable type, shall have steel frames and steel tripods supported upon and anchored to concrete piers. Cars shall be of all steel construction or other suitable materials. Ferris wheels of portable type used in carnivals and under similar conditions, shall be of steel construction set on suitable bases under the towers and the side tripods.

Automatic handle bars shall be installed where vertical thrust is encountered. On an open structure, catwalks shall be provided for emergency and maintenance purposes.

All rides shall be guyed suitable to withstand wind pressure and unbalanced load. Footings, blocking and outriggers shall be secured so as to be stable under all operating conditions.

No amusement riding device shall be overcrowded or loaded in excess of its rated safe

carrying capacity or safe operating speed.

All internal combustion engines used in driving riding devices shall be equipped with an over speed governor.

All riding devices shall be fenced, enclosed, barricaded or otherwise guarded for public protection. No person shall knowingly use or permit to be used an amusement riding device which is not properly assembled or which is defective or unsafe in any of its parts, components, controls or safety equipment. In no case shall a safety device installed on an amusement riding device be made inoperative.

Sufficient safe clearance shall be provided against injuries to all persons riding on any amusement riding devices when in motion.

Signal Systems. Signal systems for the starting and stopping of amusement riding devices shall be provided where the operator of the device does not have a clear view of the point at which passengers are loaded or unloaded. Any code of signals adopted shall be printed and kept posted at both the operator's and signalman's stations. All persons who may use these signals shall be carefully instructed in their use. Signals for the movement or operation of an amusement device shall not be given until all passengers and other persons who may be endangered are in a position of safety.

18-31-050 Pit requirements.

No device shall extend more than three feet below the ground level unless the sides and bottom of all pits are built of concrete; all pits shall be provided in the bottom with drains connected to the sewers. If pits are too deep to drain to the sewer by gravity, a syphon, automatic electric pump or other device shall be installed in the drain connection. The structure shall be of wood, steel or other serviceable material substantially fabricated and braced.

18-31-060 Braking devices.

Every roller coaster shall be provided with a terminal brake; it shall also be provided with an emergency brake that will immediately stop the train and shall be placed in some level spot on the structure; or, if approved by the building commissioner, on one of the curves. The emergency brake shall be under the control of the brakemen or other attendant at the loading platform. Every car or train shall also be equipped with a safety device arranged to catch and hold the car or train should the chain break or any other accident occur to the machinery while a car or train is in transit.

Roller coasters having more than one train shall be provided with an automatic emergency system to prevent collisions. A stalled car or train shall stop all cars or trains behind it automatically. Anti-rollback devices shall be installed on all inclined tracks of roller coasters.

Roller Coaster Ride. In an amusement ride of the dip type, the up grade in each dip shall be so constructed that the cars will run up the structure at a speed such that the cars will run over the top of the next dip without having a tendency to throw the passengers out of the cars. The

cars shall be of substantial construction; they shall be equipped with dogs to drop into a sprocket chain or other approved device to pull the bar or train to the starting point of its travel.

18-31-070 Electrical requirements.

All mechanical amusement riding devices shall be provided with electric lighting if they are to be in use after sunset.

18-31-080 Safety test.

A test shall be made of every new mechanical amusement riding device and all four safety devices shall be caused to function.

ARTICLE V. MANLIFTS AND ADJUSTABLE LOADING PLATFORMS

18-31-090 Man lifts.

Man lifts shall be designed in accordance with the provisions of the Safety Standard for Man Lifts ANSI A90. 1-1969.

18-31-100 Adjustable loading platforms.

Requirements. Every adjustable loading platform shall be provided with a toe guard attached to the undersides of the platform. In areas accessible to the public, the undersides of the platform shall be fully skirted.

The operation may be by continuous pressure button, lever and shall be in clear view of the platform. The construction of all platforms shall meet the requirements of ASME A17.1-98, Rule 203.10.

Every adjustable loading platform shall be equipped with skirt guards on the sides not used for loading.

The operation may be by continuous-pressure button, cable, lever or may take place by the movement of a truck body.

SECTION 22. This ordinance shall take full force and effect 150 days after its passage and publication.