

## Chapter Ind 55

## THEATERS AND ASSEMBLY HALLS

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**Ind 55.001 Theaters.** In the theater classification, are included all buildings or parts of buildings, containing an assembly hall, having a stage which may be equipped with curtains or permanent or movable scenery, or which is otherwise adaptable to the showing of plays, operas, motion pictures or similar forms of entertainment.

**Ind 55.01 Assembly halls.** (1) In the assembly hall classification, are included all buildings, or parts of buildings, other than theaters, which will accommodate more than 100 persons for entertainment, recreation, instruction, worship or dining purposes.

(a) Every assembly hall which will accommodate not more than 100 persons shall conform to the requirements of Chapter 54, covering factories, office and mercantile buildings.

**Ind 55.02 Class of construction. Capacities.** (1) The capacities of buildings or parts of buildings in this classification for the various types of construction shall not exceed, and shall comply, with the following requirements:

**MAXIMUM CAPACITIES**

Type of Construction	With Stage	Without Stage
Fire Resistive -----	No limit	No limit
Mill -----	750	1,500
Ordinary -----	500	1,000
Frame -----	300	750

(a) *Exception:* The fire protection for structural steel supporting the roof may be omitted in one-story buildings in this classification provided the roof and its supports are of incombustible or mill construction throughout.

(2) Frame construction. Where a building of this classification is erected of frame construction, the following restrictions shall apply:

(a) Not more than one story in height without a balcony, and with no basement except a heating and fuel room enclosed with 4-hour fire-resistive construction as specified in sections Ind 51.05 and Ind 51.06 with all interior openings protected as specified in section Ind 51.09.

(b) Located at least 20 feet from any other building or adjoining property line.

(c) Is not built in connection with a building used for any other purpose.

(d) Is provided with foundation walls and piers of masonry construction.

(e) Where motion picture booths are required, they shall be enclosed with 4-hour fire-resistive construction.

*Exception:* In places of worship, a full basement and a balcony seating not more than 30 persons may be provided.

(3) Balconies accommodating more than 100. In any theater or assembly hall, balconies which accommodate more than 100 persons shall be of fire-resistive construction as specified in section Ind 51.001.

**History:** 1-2-56; (1); (1) (a); (2); (2) (a); (2) (b); (2) (c); (2) (d); (2) (e); (2) (f); (3); am. Register, June, 1956; No. 6, eff. 7-1-56; am. (1) (a), Register, August, 1957, No. 20, eff. 9-1-57.

**Ind 55.03 Height above grade.** (1) **THEATERS.** The height of the sills of the principal entrance doors to any theater, as defined in section Ind 55.001, shall be not more than 18 inches above the outside grade at that point. The floor level at the highest row of seats on the main floor shall not be more than 6 feet above the outside grade at the main entrance; the floor level at the lowest row of seats on the main floor shall be not more than 6 feet below, or above, the grade at the nearest exit.

(2) **ASSEMBLY HALLS AND ROOF GARDENS ABOVE FIRST STORY.** Where assembly halls are provided above the first story, the following limitations of occupancy, type of construction and exit facilities shall apply:

Type of Construction	Maximum No. of Occupants	Height Above Grade
Fire-Resistive -----	No Limit	No Limit*
Fire-Resistive, Mill, or Ordinary -----	400	2nd Story or 22 feet
Fire-Resistive, Mill, or Ordinary -----	200	3rd Story or 35 feet

\* One smokeproof stair tower from the level of the assembly hall leading directly to the exterior at street grade shall be provided for every 750 persons capacity, or fraction thereof. These stairways shall be at least 44 inches wide and shall be in addition to other required stairways in the building.

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(3) **BASEMENT ASSEMBLY HALL.** An assembly hall may be placed in the basement of a fire-resistive building if the capacity does not exceed 2500 persons or in a building of mill or ordinary construction if the capacity does not exceed 400 persons and the floor level is not more than 7 feet below the highest level at any exit.

**Ind 55.04 Exposure and courts.** (1) Every theater or assembly hall which accommodates more than 600 persons shall have at least 3 walls abutting on streets, alleys, or open courts.

(2) The wall containing the main entrance to any theater or assembly hall shall abut on a street. The lobby or passageway leading from the main entrance doors to the foyer or auditorium shall be direct and unobstructed and of a minimum width equal to the sum of the widths of the main entrance doors. There shall be no openings from other occupancies to such a corridor or passageway.

(3) The width of every exit court shall be at least 6 feet for an occupancy not exceeding 500 persons, and shall be increased at the rate of one foot per each 500 persons additional. Every such court shall lead to a public thoroughfare, either directly, or through a passageway of equal width, not less than 8 feet high enclosed with unpierced 4-hour fire-resistive walls, ceiling and floor as specified in sections Ind 51.05 and Ind 51.06. The floor and ceiling shall be designed for a live load of not less than 150 pounds per square foot. No such court, or passageway shall be used for storage or any other purpose whatsoever.

**Ind 55.05 Separation from other occupancies.** (1) Every theater and assembly hall shall be separated from any other occupancy by an absolute occupancy separation as specified in section Ind 51.08, except that a special occupancy separation as specified in section Ind 51.08 may be used between an assembly hall accommodating not more than 750 persons and any other non-hazardous occupancy. Where a special occupancy separation is permitted in this order, a single fire-resistive door may be used for the protection of openings.

(2) For assembly halls of unlimited capacity located on upper floors of fire-resistive buildings which are served by elevators, the elevator openings may be permitted under the requirements for special occupancy separation specified in section Ind 51.08, but otherwise, absolute occupancy separation is required.

(3) No garage, chemical laboratory or other occupancy where flammable or explosive liquids or gases are used or stored shall be located in the same building with a theater or assembly hall.

**Ind 55.06 Capacity.** (1) The following table includes various types of occupancy within the scope of this section, together with the method to be used in determining the capacity.

(2) No greater number of persons than the number thus established shall be permitted in any theater or assembly hall.

Use or Occupancy	Basis of Capacity
(a) Arenas and Field Houses -----	4 sq. ft. per person. Use seated areas only.
(b) Assembly Halls, with stage -----	7 sq. ft. per person.
(c) Banquet Halls -----	10 sq. ft. per person.
(d) Churches (Auditoriums) -----	7 sq. ft. per person.

(e) Churches (Dining Rooms) -----	10 sq. ft. per person.
(f) Dance Halls -----	10 sq. ft. per person.
(g) Dining Rooms -----	10 sq. ft. per person.
(h) Gymnasiums -----	6 sq. ft. per person for seated space. 15 sq. ft. per person for unseated space.
(i) Lecture Halls -----	7 sq. ft. per person.
(j) Lodge Halls -----	6 sq. ft. per person for seated space. 15 sq. ft. per person for unseated space.
(k) School Auditoriums -----	7 sq. ft. per person.
(l) Skating Rinks -----	15 sq. ft. per person.
(m) Theaters -----	7 sq. ft. per person.
(n) Theater Lobbies -----	7 sq. ft. per person.

(3) The capacity of theaters and theater lobbies must be combined to determine the theater capacity.

**Ind. 55.07 Number and location of exits.** (1) Every floor and balcony of a theater and assembly hall shall be provided with not less than 2 exits, placed as far apart as practicable and so located that if any exit is blocked, some other exit will still be available from every part.

*Exception:* In places of worship, only one exit will be required from a balcony seating not more than 30 persons.

(2) Where more than 600 persons are accommodated, there shall be at least 3 exits and where more than 1,000 persons are accommodated, there shall be at least 4 exits.

(3) Exits shall be distributed on all sides which adjoin streets, alleys or open courts.

**Ind 55.08 Type of exits.** (1) The required exits from any part of a theater or assembly hall shall be exit doorways, stairways or ramps.

(2) All exits to grade from a higher or lower level shall be stairways or approved ramps. In all theaters and in assembly halls having a capacity of more than 400 persons, where the exit rise is not more than 3 feet approved ramps shall be used. By approved ramp is meant an incline located inside the building and having a slope of not more than one foot of rise in 8 feet.

(3) Stairway exits shall be interior stairways, or smokeproof towers as specified in section Ind 51.17; except that "B" type fire escapes may be used as exits from balconies for not more than one-half the required exit width, if located against blank walls.

**Ind 55.09 Stairways.** (1) Every stairway in a theater or assembly hall, except stairways from the main floor to the first balcony, shall be enclosed as specified in sections Ind 51.17 and Ind 51.18. No closet or open space shall be placed under any stairway, platform or landing.

(2) Stairways and steps which have more than 3 risers shall have handrails on both sides.

(3) Every stairway used by the public in a theater or assembly hall, shall have a uniform rise of not more than 7½ inches and a uniform tread of not less than 10 inches, measuring from tread to tread and

from riser to riser. No winders shall be used and there shall be not less than 3 nor more than 16 risers in any run.

*Note:* See section Ind 51.16 for general stairway requirements.

**Ind 55.10 Exit doorways and doors.** (1) Every required single exit doorway shall contain a standard exit door as specified in section Ind 51.15. For double doors, with or without mullions, the width of each door may be reduced to 2 feet 6 inches.

(2) No single door or leaf of a double door, shall be more than 3 feet 6 inches wide, and no 2 doors shall be hinged together.

(3) No rolling, sliding or revolving door shall be counted as an exit from any theater or assembly hall, nor shall any such door be permitted where it would be liable to be used by the public as an exit.

(4) Sills at all exit doorways shall be level and flush with adjacent inside floors and ramps. Where an aisle or passageway leads to an exit from either side of the exit doorway there shall be a level floor space at the doorway subtending the width of the aisle and the doorway.

**Ind 55.11 Exit lights.** (1) In every theater and assembly hall, except church auditoriums, exit lights shall be provided immediately over all exit doorways, and in such other places as may be necessary to direct the occupants to exit doorways and to a street, alley or exit court. The installation of such exit lights shall comply in all respects with the provisions of the Wisconsin state electrical code.

(2) Every light over an exit doorway shall be a red illuminated sign bearing the word EXIT or OUT in plain letters not less than 5 inches in height.

(3) All exit lights shall remain lighted during each occupancy and until the occupants have left the building.

**Ind 55.12 Width of exits.** (1) The total width of exits from every theater and assembly hall, and from every part thereof, shall not be less than the following: Buildings of fire-resistive construction, 36 inches per 100 persons. Buildings of ordinary construction, 40 inches per 100 persons. Buildings of frame construction, 44 inches per 100 persons.

(2) In theaters, the width of the front entrance shall be not less than  $\frac{1}{8}$  of the total required exit width.

**Ind 55.13 Seating.** (1) All seats, chairs and benches shall be placed not less than 32 inches back to back measured horizontally, except that for grandstands and bleachers without back rests this dimension may be reduced to 24 inches. For benches without arms, grandstand and bleacher seats, the seating capacity shall be established by allowing one sitting or seat to each 18 inches of length. (See section Ind 55.54).

(2) All seats, chairs and benches, except chairs in boxes or loggias, shall be securely fastened to the floor; or if the floor is level, the seats or chairs may be fastened together in groups of 4 or more. Loose chairs or seats shall not be used unless a special permit is secured from the industrial commission.

(3) There shall not be more than 12 seats in a row between aisles, nor more than 6 seats in a row which has an aisle on one side only, except that for grandstands and bleachers without back rests and with

a railing along the front, these figures may be doubled. No aisles will be required for such grandstands or bleachers where the seats extend to the floor or ground without a railing along the front.

(4) No seat bench or platform on which seats are placed shall be more than 22 inches in height of riser.

(5) No seat bench, or other platform or floor area on which seats are placed, or the top seat of any bleachers shall be nearer the ceiling than 8 feet, nor nearer to the bottom of any truss or girder than 6 feet 4 inches.

(6) The requirements of this order do not apply to restaurants, dining or dance halls.

**Ind 55.14 Width of aisles.** (1) Aisles having seats on both sides shall not be less than 2 feet 10 inches wide at the beginning and shall increase in width toward the exits at the rate of  $\frac{1}{4}$  inch per foot of run; or the aisle may have a uniform width not less than the average width of the foregoing calculation. No wall aisle shall be less than 3 feet wide and no other straight aisle shall be less than 3 feet 6 inches wide.

(2) There shall be a cross aisle leading to each required side exit. Cross aisles shall not be less than 6 feet 8 inches back to back of adjacent rows of seats.

**Ind 55.15 Lobbies and foyers.** The width of lobbies and foyers shall be determined on the same basis as required for exits in section Ind 55.12, but shall in no case be less than 5 feet wide, and shall be so designed and apportioned as to prevent congestion and confusion. Lobbies and foyers which serve as means of egress shall be at least equal in combined width to the required width of the stairways, passageways, aisles or exit doorways leading to them.

**Ind 55.16 Inclines and aisle steps.** (1) To overcome any difference in level between courts, corridors, lobbies, passageways or aisles required, or used, in egress from a theater or an assembly hall, approved ramps as specified in section Ind 55.08 shall be employed where the difference in elevation does not exceed 3 feet, except that this requirement need not apply to balconies.

(2) Steps in balcony aisles shall extend the full width of the aisle and shall have a uniform rise and run as specified in section Ind 55.09. No handrails will be required.

**Ind 55.17 Obstruction.** (1) All lobbies, aisles, passageways and doorways shall be kept free from furniture, drapes, display equipment, merchandise, vending machines and other obstructions, and no person except an employe shall be allowed to stand in, or occupy, any of the aisles, passageways, corridors or lobbies during any performance or public gathering. Except that patrons may be allowed to wait in a lobby or similar space if such use does not encroach upon the required clear width of the exits. Such waiting shall be restricted to areas separated from the required exit ways by fixed railings not less than 42 inches high. In entrance lobbies only, the exit space may be divided by railings not less than 36 inches high set up in the direction of travel in an approved manner for the regulation of ingress and egress.

(2) A booth or counter for the sale of package merchandise may be placed in the lobby or foyer of a theater where there is sufficient

excess space so that the front of the booth or counter can be located not less than 5 feet back of the line marking the width of the lobby or foyer required for exit purposes.

**Ind 55.18 Mirrors and false openings.** (1) No mirror shall be placed in any part of a theater or assembly hall used by the public for exit purposes, including lobbies, corridors, stairways, ramps or any other exit facility. Where a mirror is used in an auditorium, it shall be placed flush with the wall and with the bottom at least 7 feet above any floor, balcony, gallery or platform.

(2) No false opening or decorative device giving the appearance of a door or window, where none exists, shall be placed in any part of a theater or assembly hall used by the public.

**Ind 55.19 Decorations.** Fabric decorations used in theaters and assembly halls shall be flame proof.

**Ind 55.20 Elevator and vent shafts.** Enclosures for elevator and vent shafts shall be of 2-hour fire-resistive construction as specified in section Ind 51.05 and all openings therein protected by fire-resistive doors or windows as specified in sections Ind 51.09 and Ind 51.10.

**Ind 55.21 Stage separation.** (1) In every theater and assembly hall the stage shall be completely separated from the auditorium by a proscenium wall of 4-hour fire-resistive construction as specified in section Ind 51.05, except as follows:

(a) In theaters and assembly halls having a capacity not exceeding 500 persons, the proscenium wall shall be of 2-hour fire-resistive construction as specified in section Ind 51.05, or better.

(b) In theaters and assembly halls an open stage or platform will be permitted without the proscenium wall separation from the auditorium, provided the stage or platform is not more than 6 feet higher or wider than the proscenium opening.

**Ind 55.22 Proscenium wall.** (1) The proscenium wall shall extend from an incombustible foundation, or from the lowest fireproof floor below the stage floor, to the highest adjoining roof, except that where a 4-hour fire-resistive wall is required it shall extend at least 2 feet above the highest adjoining roof.

(2) There shall be not more than 2 openings in the proscenium wall below the level of the auditorium floor, and not more than 2 openings other than the proscenium opening, in the proscenium wall above the level of the auditorium floor, except that in addition to the above openings there may be one opening to provide access through the proscenium wall to the orchestra pit.

(3) Each such opening shall not exceed 21 square feet in area and shall be protected by a fire-resistive door as specified in section Ind 51.09, or equal.

**Ind 55.23 Proscenium curtain.** (1) Where a proscenium wall is required for the separation of a stage from an auditorium, the proscenium opening if more than 60 feet in width shall be provided with a rigid metal curtain conforming to the regulations contained in Appendix P of the Building Code recommended by the National Board of Underwriters, Fifth Edition, Revised Reprint, 1934. For a proscenium opening 60 feet or less in width, a rigid metal curtain or

a curtain of asbestos conforming to the following specifications, or of equivalent approved construction, shall be used.

(2) Asbestos curtains shall be substantially woven of asbestos fiber not less than 95% pure, and shall weigh not less than 2½ pounds per square yard. There shall be incorporated into the yarn before weaving, either monel metal, nickle, brass or other metal or alloy, having not less strength than these metals at temperatures up to 1700 degrees Fahrenheit and no less resistance to corrosion at ordinary temperatures. All seams shall be vertical, shall be lapped not less than one inch and shall be sewed in 2 rows with not less than ⅛ inch pure asbestos twine. At the top and bottom of the curtain a 2½ inch (or larger) steel pipe shall be placed and shall be securely fastened in, and covered by, the curtain. The curtain shall overlap the proscenium wall not less than 12 inches at each side and at the top, and shall be guided at each side by metallic loops or rings sliding on a ⅜ inch steel cable or No. 6 U.S. standard gauge wire.

(3) In addition to any decoration, the curtain shall be painted on both sides with a mineral paint having a silicate of soda binder, which will completely fill the cloth. Filler paint shall have not less than 4 parts of casein in each 10 parts of silicate of soda. The paint shall be well brushed into the cloth so that no light or smoke can come through.

(4) For curtains of any type, the connections between curtain and wall shall be made as nearly smoke-proof as possible. Smoke grooves or pockets shall be of structural steel shapes and plates not less than ¼ inch thick. These grooves or pockets shall be not less than 14 inches deep and 6 inches wide and shall be set back from the face of the arch at least 6 inches. They shall extend from the stage floor to a point 3 feet above the top of the raised curtain, and shall be securely bolted to the proscenium wall.

(5) Provision shall be made to prevent the curtain from leaving or binding on the guides under any conditions. Appropriate limit chains shall be provided to stop the downward travel of the top of the curtain at a line not less than 12 inches above the top of the proscenium opening. No part of a curtain, nor any of the curtain guides, or equipment, shall be supported by, or fastened to, any combustible material.

(6) The hoisting apparatus for the curtain shall be designed with a factor of safety of 8 or more.

(7) Besides the regular operating mechanism, there shall be an emergency device which will allow the curtain to drop by gravity. The device shall be so arranged that it can be easily operated by hand from each side of the stage and from the fly galleries, and also that its operation will be controlled by 135 degree fusible links, or other approved heat release devices, placed on each side of the stage, and when thus operated the curtain shall descend at its normal rate of speed.

(8) The curtain and its operating mechanism shall be so designed and constructed at all points, whether specifically mentioned or not, as to form an efficient and reliable barrier against fire and smoke, according to the best practice.

(9) Detailed plans and specifications for all curtains and their operating mechanism shall be submitted to the industrial commission for approval before installation.

**Ind 55.24 Automatic smoke outlet.** Where a fireproof proscenium curtain is required, or provided, the stage shall be provided with one or more automatic smoke outlets, constructed of metal or other incombustible material, placed near the center and above the highest part of the stage, and having a combined area equal to not less than 8% of the area of the stage floor. Vertical louver openings shall be placed not less than 3 feet above the roof and shall be not less than twice the area of the shaft. The smoke outlet shall be designed and constructed so as to open by gravity, and so as to effectively overcome the effects of neglect, rust, dirt, frost, snow, heat, twisting, or warping of the frame work. The louvers, or dampers in the openings shall be held closed by cotton or hemp cords running to the stage floor close to each stage door. Fusible links, or other approved heat release devices, shall be inserted in each cord near the outlets.

**Ind 55.25 Stage vestibules.** All entrances to the stage shall be vestibuled in such manner as to protect the curtain, scenery, and auditorium from drafts of air.

**Ind 55.26 Footlight trough.** The footlight trough shall be made of, or lined with, incombustible material.

**Ind 55.27 Fireproof paint.** All stage scenery, properties, curtains, and decorations made of combustible material, and all woodwork in or about the stage, shall be effectively flame-proofed.

**Ind 55.28 Stage accessory rooms.** (1) All dressing rooms, property rooms, and other storage or workrooms shall be built of incombustible material throughout, and shall be separated from the stage by a special occupancy separation as specified in section Ind 51.08. ✓

(2) No dressing room or employees' room shall be placed more than one story below the grade line, and no dressing room shall be placed above or below the auditorium unless separated therefrom by a special occupancy separation as specified in section Ind 51.08. ✓

**Ind 55.29 Boiler and furnace rooms.** (1) Every boiler or furnace room, including breeching and fuel room, shall be enclosed with a special occupancy separation as specified in section Ind 51.08, except that in the case of an assembly hall accommodating not more than 300 persons, an ordinary occupancy separation as specified in section Ind 51.08 may be used. *am*

(2) All appliances used for heating water which are fired with solid fuel, liquid fuel or gas shall be located in a boiler or furnace room except that gas fired booster water heaters used exclusively for sanitizing dishes and cooking utensils need not be installed in a fire-resistive enclosure.

**History:** 1-2-56; r. and recr. (2), Register, August, 1957, No. 20, eff. 9-1-57.

**Ind 55.30 Lights and lighting.** (1) Electric lights shall be used for lighting where electric current is available. No oil lamps or other open lights shall be used in or about any stage containing scenery.

(2) No gas lighting of any kind shall be used on any stage containing scenery, nor in any property room, storage room, scene dock, or fly gallery, except in localities where electricity is not available.

(3) In all theaters and assembly halls, all stairways, passageways, and exit doors shall be properly lighted and shall remain lighted throughout every performance or entertainment and until the audience has left the building.

**Ind 55.32 Sanitary equipment. (1) TOILETS AND URINALS.** Separate toilet rooms in connection with the auditorium shall be provided for males and females. One water-closet shall be installed for each 200 females or fraction, and one water-closet and one urinal for each 300 males or fraction, assuming the audience to be equally divided between males and females; except that in dance halls there shall be provided one water-closet for each 100 females or fraction, one water-closet for each 300 males or fraction and one urinal for each 150 males or fraction.

(2) **NUMBER OF TOILETS WHERE ALCOHOLIC BEVERAGES ARE SERVED ON PREMISES.** Where stimulating drinks, such as beer, wines and other alcoholic beverages, are served for consumption on the premises, there shall be provided one water-closet for every 40 females, or fraction, one water-closet for every 150 males, or fraction, and one urinal for every 50 males, or fraction; except that where the capacity in such places exceeds 300 persons, the ratio of the number of fixtures to the number of persons accommodated in excess of 300 need be only one-half of the above.

(3) **TOILETS IN CONNECTION WITH STAGE.** There shall be separate water-closets provided for males and females in connection with the stage of every theater and assembly hall which is equipped for the showing of stage productions.

(4) **TOILETS IN CONNECTION WITH MOTION PICTURE BOOTH.** In theaters where motion picture machines are run continuously for a period of more than 2 hours without at least 10 minutes intermission for the motion picture machine operator for each 2 hour period, toilets shall be provided in direct connection with the motion picture booth.

*Note:* For general toilet room requirements see sections Ind 52.50 to Ind. 52.64, inclusive.

(5) **DRINKING WATER.** Separate drinking fountains of a type approved by the state board of health shall be provided for the stage and auditorium where water supply is available. Drinking fountains shall not be placed in toilet rooms.

(6) **WASHING FACILITIES.** Washbowls shall be provided in connection with toilet rooms, one for every 2 closets and urinals or fraction.

**Ind 55.33 Standpipes.** Where proper water supply is available, at least one first aid standpipe, as specified in section Ind 51.21, shall be provided on the stage of every theater and assembly hall where a fire curtain is required. Each hose shall be not more than 75 feet long, and where such hose will not reach every part of the stage section additional hose connections and hose, or additional standpipes, shall be provided.

**Ind 55.34 Fire extinguishers.** (1) Standard fire extinguishers of an appropriate type as specified in section Ind 51.22 shall be provided for all theaters and assembly halls as follows:

- (a) Two on stage, if scenery is used.
  - (b) One on stage, if no scenery is used.
  - (c) One in motion picture booth, or in ticket office if there is no booth.
  - (d) One in dressing room section.
- (2) Extinguishers shall be properly exposed to view and always accessible.

**Ind 55.35 Automatic sprinklers.** In every theater and assembly hall where a proscenium curtain is required, approved automatic sprinklers, as specified in section Ind 51.23, shall be provided under the stage, under the stage roof, and in the dressing rooms, but not in the automatic smoke outlet.

**Ind 55.40 Motion picture machine booths, general.** Every motion picture machine using nitro-cellulose film, together with all auxiliary and associated equipment, shall be enclosed in a booth so arranged as to permit the operator to walk freely on either side and in back of the machine. At least 48 square feet in area shall be provided for one machine, and 24 square feet additional for each machine over one. The ceiling height shall be not less than 7 feet.

**Ind 55.41 Construction of booth.** The floor of each motion picture booth shall be constructed of masonry or reinforced concrete, or shall be covered with not less than 2 inches of fire-resistive material. The walls and ceiling shall be not less than 2-hour fire-resistive construction as specified in section Ind 51.05.

**Ind 55.42 Doors.** (1) The door to the booth shall be not larger than necessary for the safe and proper use and maintenance of the booth and equipment, but in no case shall its dimensions be smaller than 2 feet by 5 feet or larger than 3 feet by 7 feet. The top of the door shall be not less than 12 inches below the ceiling of the booth.

(2) The door shall be a tight-fitting self-closing fire door as specified in section Ind 51.09, shall open outwardly, and shall not be equipped with any latch.

**Ind 55.43 Openings.** (1) Two openings for each motion picture machine may be provided. The one for the operator's view shall not be larger than 200 square inches and the one for projection not larger than 120 square inches. Where separate stereopticon, spot, or flood-light machines are installed, not more than one opening shall be provided for each such machine for both the operator's view and the projection of light. All such openings shall be as small as practicable.

(2) Each opening shall be provided with an approved gravity shutter set into guides not less than one inch at sides and bottom, and overlapping the top of the opening by at least one inch when closed. Shutters shall be not less than No. 10 U.S. Standard gauge iron or equivalent, arranged to move freely in guides of like material and thickness bolted to the wall. Each shutter shall be suspended by a cord, and shall be so arranged that closing is by gravity action. A

fusible link shall be provided in the cord over each shutter. A link shall also be provided over each magazine, which on operating will close all shutters. A manual release shall be provided near each exit door by which all shutters can be closed simultaneously. Shutters shall not be blocked open nor held open in any manner except by the harness of cords and links as herein described.

**Ind 55.44 Ventilation of booths.** Every booth or room housing projection, sound or any other equipment which vitiates good air conditions or requires the attention of an attendant shall be ventilated as required by section Ind 58.43 of the heating, ventilation and air conditioning code issued by the industrial commission. Fresh air intakes in booth walls, except for outside air, shall not exceed 72 square inches in area, nor be more than 3 inches above the floor. They shall be equipped with automatic shutters as described for projection openings.

**Ind 55.45 Relief outlets.** Every booth or room housing projection, sound or other equipment which constitutes a fire, smoke, explosion or fuming hazard shall be equipped with one or more gravity outlets extending upward from the ceiling through the roof. The net area of such gravity relief outlets shall be equal to one per cent of the room or booth floor area, but not less than 12 inches in diameter. Such outlets shall be constructed as sheet metal ducts having double walls with  $\frac{1}{2}$  inch air space between, or better construction. Where a relief outlet passes through, or is within 18 inches of any combustible construction, or passes through any other occupancy, approved masonry flues as specified for chimneys, section Ind 52.10, shall be used. The relief outlets shall be equipped, at the booth or room outlets, with a gravity shutter which will open automatically under excessive heat conditions. The automatic shutter shall normally be tightly closed where mechanical exhaust ventilation is required in the same room.

**Ind 55.46 Electric wiring.** All lights and electric wiring, also motors, arc lamps, rheostats, and associated electrical equipment shall conform in type and arrangement to the requirements of the Wisconsin state electrical code.

**Ind 55.47 Motion picture machine.** Every projection machine shall be securely fastened to the floor, and together with sound head and other associated equipment, shall be of safe design. No part of the film shall be outside of a tight metal enclosure during projection, and the feed and take-up reels shall have riveted, flanged, or welded joints. A shutter shall be placed in front of the condenser, arranged so as to be closed except when held open by the operator, or by some mechanical device which will assure immediate closure when operation of the machine is stopped.

**Ind 55.48 Fire protection in booth; care and use of film.** (1) All shelves, furniture and fixtures shall be incombustible. No combustible material shall be permitted to be within such booth, except films and film cement not exceeding one pint. Smoking is prohibited. Heating equipment in booths shall be limited to steam, warm air, hot water or electric convection heaters with low surface temperature elements.

Radiators shall be protected by  $\frac{1}{4}$  inch mesh screen with the top sloped at least 45 degrees to the horizontal.

(2) Films not in process of rewinding, examination or projection shall be kept in metal containers. Up to 40 pounds of film may be kept in the projection booth in interstate commerce commission shipping containers. Excess over 40 pounds shall be kept in an approved film cabinet, but the total quantity of film in any booth shall not exceed 125 pounds.

(3) Rewinding in the projection booth is prohibited unless done in an approved enclosed type rewind machine. An approved can with self-closing hinged cover shall be provided for scrap film.

(4) Up to 125 pounds of film in addition to that permitted in a projection booth, may be kept in containers as specified above, providing this excess is in a rewind room of not less than 80 square feet area, and of the construction specified in sections Ind 55.41 and Ind 55.42. Such room shall have a vent of at least 50 square inches area extending upward to the outside of the building, with a clearance to combustible material conforming to section Ind 55.45. Furniture and heating shall be as for the projection booth, and smoking is prohibited.

*Note:* In the foregoing section the weight of a 1000 foot roll of 35 millimeter film is assumed as 5 pounds.

**Ind 55.49 Portable booths.** (1) Every portable booth used to confine the fire hazards of a motion picture machine shall be of approved design conforming to the requirements for permanent booths.

(2) Every booth used for more than 3 consecutive performances in one location will be considered a permanent booth.

**Ind 55.50 Maintenance.** All theaters and assembly halls, and all parts thereof, shall be kept clean, sanitary and in good repair.

#### GRANDSTANDS, BLEACHERS, TENTS AND PLACES OF OUTDOOR ASSEMBLY.

**Ind 55.51 Grandstands.** (1) Grandstands erected of frame construction shall be located at least 20 feet from any other building or adjoining property line unless the exterior walls of such adjacent building are of 2-hour fire-resistive construction or better and all openings therein are protected with fire-resistive doors and windows as specified in sections Ind 51.09 and Ind 51.10.

(2) No wood grandstand unit shall exceed 10,000 square feet in ground area or 200 feet in length.

(3) Wood grandstand units shall be placed not less than 20 feet apart or shall be separated by walls of not less than 2-hour fire-resistive construction.

(4) The highest level of seat platforms of any wood grandstands shall not be more than 20 feet. Portable grandstands or bleachers within tents shall not be more than 12 feet above the ground or surface at the front of the grandstand.

(5) All grandstands shall be designed and constructed to conform with the structural requirements of Chapter 53 of this code.

(6) Seat boards and foot boards shall be designed to safely support a live load of not less than 120 pounds per lineal foot. The width of foot boards shall not be less than  $7\frac{1}{2}$  inches.

(7) The space under a grandstand shall be kept free from extraneous flammable materials and shall not be occupied for other than exit purposes except that such space, if enclosed with one-hour fire-resistant construction or better, may be used for non-hazardous purposes if approved in writing by the industrial commission.

**Ind 55.52 Exits.** (1) Every grandstand, balcony or tier considered separately shall be provided with at least 2 exits located as remotely from each other as practicable and leading directly to the outside at grade. If the capacity of any such structure, balcony, or tier exceeds 1,000 persons, there shall be at least 3 exits and where the capacity exceeds 4,000 persons, there shall be at least 4 exits.

(2) Exits shall be distributed uniformly to prevent congestion and shall be so located that the line of travel to an exit or to the entrance to an exit passageway is not greater than 150 feet.

(3) The total width of exits from any grandstand, balcony or tier shall not be less than 22 inches per 100 persons, except that for grandstands which are constructed of incombustible material throughout and have a closed incombustible deck under the seats, the total width of exits may be not less than 22 inches for each 500 persons or fraction.

**Ind 55.53 Aisles and passageways.** (1) All ramps, stairs, doorways and doors used for exit purposes shall conform to the requirements of sections Ind 55.08, Ind 55.09 and Ind 55.10 of this code.

(2) Aisles having seats on both sides shall not be less than 3 feet 6 inches in width and aisles having seats on one side only shall not be less than 24 inches wide. Cross aisles shall not be less than 48 inches in width. No aisles will be required for grandstands or bleachers where the seats extend to the floor or to the ground without a railing along the front.

(3) Trailer seating mounted on incombustible decking not exceeding 300 capacity each shall be provided with aisles or stairways not less than 36 inches in width.

**Ind 55.54 Seating.** (1) The seating arrangement shall comply with the requirements of section Ind 55.13 except that for seats without backs the horizontal distance from back to back of seats shall not be less than 22 inches. There shall be a space of not less than 12 inches between the back of each seat and the front of the seat immediately behind it. All measurement is to be taken between plumb lines.

(2) Where the same level is not used for both seat bench and foot rest, independent foot rests shall be provided.

(3) All seat boards and foot boards shall be securely fastened in place in such a manner that they cannot be accidentally displaced.

(4) Where the rise of a seat bench or platform exceeds 11 inches, intermediate steps shall be provided the full width of the aisles. Such steps shall have a rise of not more than 11 inches and a tread of not less than 10 inches *nominal width*. In no case shall the angle of seating exceed 45 degrees.

**Ind 55.55 Guard rails.** A substantial guard rail not less than 42 inches in height and having 2 intermediate rails shall be provided along the back and ends of all grandstands where the seats are more

than 4 feet above the ground. Where the front foot rest of any grandstand is more than 2 feet above the ground, a guard rail extending not less than 36 inches above such front foot rest shall be provided.

**Ind 55.56 Portable grandstands or bleachers.** (1) Portable grandstands or bleachers shall be self-contained units having all necessary parts to withstand and restrain all forces which may be developed during occupancy. They shall be so designed and constructed that if any structural member essential to the strength and stability of the structure is omitted during erection, the presence of unused connections or fittings will make the omission self-evident.

(2) A portable grandstand shall not be used for public occupancy until it has been securely assembled in accordance with this requirement.

(3) Portable grandstands shall be provided with base plates, sills, floor runners, or sleepers of sufficient area and strength to support safely the total live and dead loads.

(4) Where portable grandstands rest directly on the ground, mud sills of suitable material and having sufficient area to prevent dangerous settlement shall be provided under the base plates or sleepers. All mud sills shall be properly anchored to the ground and all bearing surfaces shall be in contact.

(5) A-frames or other supports and seat stringers for portable grandstands or bleachers shall be secured to prevent accidental displacement during occupancy.

(6) Field connections to wood members shall be by means of rivets, bolts, connectors, lag screws, friction or other approved devices. Lag screws shall not be used for direct tension. The use of nails and wood screws is permissible for holding wood posts together except that they shall not be used for demountable connections.

(7) Wood members in tension shall be connected at each end by not less than 2 bolts or lag screws or by approved connectors or other approved devices. Adequate provision shall be made to prevent the splitting or shearing of wood at such connections.

**Ind 55.57 Inspection.** Every portable grandstand or bleacher shall be carefully inspected by a building official before each period of public occupancy and any loose connections, defective or broken members or loose supports shall be properly repaired before the structure is used. In cities or towns which do not have a building official, such inspections shall be made by the chief of the fire department or other public official designated by the industrial commission.

**Ind 55.58 Tents.** (1) For the purpose of this section, a tent is a portable, temporary shelter or a structure, the covering of which is made of pliable material.

(2) No tent shall be erected to cover more than 75% of the premises on which it is located.

(3) Tents used for assembly purposes which cover 1500 square feet or more of ground area shall be located at least 20 feet from any other structure or adjoining property lines.

(4) Stake lines of adjacent tents used for assembly purposes shall be sufficient distance from each other to provide an emergency exit

passageway not less than 6 feet in width between stake lines. Proper protection shall be provided along such stake lines to eliminate tripping hazards.

(5) Concession and other tents not used for assembly purposes need not be separated from each other and may be located less than 20 feet from other structures.

(6) This section does not apply to tents or shelters used exclusively for construction purposes.

**Ind 55.59 Structural requirements.** (1) Poles and other members supporting tents shall be of sufficient size and strength to support the structure safely without exceeding the stresses specified in Chapter 53 of this code.

(2) All tents shall be adequately guyed, supported and braced to withstand a wind pressure or suction of not less than 10 pounds per square foot.

(3) The poles, guys, stakes, fastenings, etc., shall be of sufficient strength and so attached as to resist a wind pressure of at least 20 pounds per square foot of projected area of the tent.

**Ind 55.60 Flame resistance.** All tents used for assembly purposes or in which animals are stabled and all other tents used by the public in places of outdoor assembly shall be effectively flame-proofed. The owner shall furnish a certificate or a test report by a recognized testing engineer or laboratory as evidence that such tents have the required flame resistance.

**Ind 55.61 Fire hazards.** (1) The ground enclosed by any tent used in connection with a place of outdoor assembly and for a distance of not less than 10 feet outside such structure on all sides shall be cleared of all flammable material or vegetation which will transmit fire. The premises shall be kept free from such flammable material during the period the premises are used by the public.

(2) No hay, straw, shavings or similar combustible materials other than that necessary for the current feeding and care of animals shall be permitted within any tents used for public assembly except that sawdust and shavings be used if kept damp.

(3) No smoking or unapproved open flame of any kind shall be permitted in any tent while occupied by the public. "No Smoking" signs shall be conspicuously posted in all tents open to the public.

(4) Tents shall not be used for motion picture performances unless safety film is used.

**Ind 55.62 Exits.** (1) Every tent occupied by the public shall have at least 2 standard exits located at or near opposite ends of the structure.

(2) In tents used for assembly purposes, exits shall be provided on 3 sides if the capacity exceeds 600 persons and on 4 sides where the capacity exceeds 1,000 persons. Exits shall be uniformly distributed but in no case shall the line of travel to an exit be greater than 150 feet.

(3) The total width of exits from a tent used for assembly purposes shall not be less than 44 inches per 100 persons. Exit openings shall comply in all respects with the requirements of sections Ind 55.10 and Ind 51.15 of this code.

**Ind 55.63 Electrical installations.** (1) Electrical systems in all places of outdoor assembly shall be installed in accordance with the requirements of the Wisconsin state electrical code. All such systems shall be maintained and operated in a safe and workmanlike manner.

(2) The electrical system and equipment shall be isolated from the public by proper elevation and guarding. All electrical fuses and switches shall be installed in approved enclosures. Cables laid on the ground or in areas traversed by the public shall be placed in trenches or protected by approved covers.

**Ind 55.64 Fire extinguishing equipment.** One or more fire extinguishers of approved type and size shall be provided in connection with every wood grandstand and in all tents used for assembly purposes. Such extinguishers shall be maintained in proper working order and shall be located where they are easily accessible, preferably in or near the ticket office. In large installations, additional fire extinguishing equipment shall be provided as directed by the building official.

**Ind 55.65 Illumination; exit lights and signs.** (1) All exits, aisles and passageways leading to exits in grandstands and other places of outdoor assembly shall be kept adequately lighted at all times when the structure is occupied by the public. Artificial illumination having an intensity of not less than 2.5 foot candles at the floor line shall be provided when natural light is inadequate.

(2) Exit lights and signs complying with the requirements of section Ind 55.11 shall be provided in all places of outdoor assembly where more than 100 persons can be accommodated.

**Ind 55.66 Boiler and furnace room.** Every boiler or furnace room, including the breeching and fuel room, in places of outdoor assembly, shall be enclosed with a 2-hour fire-resistive enclosure or better and all interior openings in walls forming such enclosures shall be protected by self-closing fire-resistive doors. Gas-fired appliances for heating water shall be installed in a boiler or furnace room. Chimneys shall be constructed in conformity with the requirements of section Ind 52.10 of this code.

**Ind 55.67 Toilet facilities.** Separate toilets shall be provided for each sex in connection with all places of outdoor assembly. Toilet rooms and equipment shall comply in all respects with the requirements of sections Ind 52.50-Ind 52.64, inclusive, of this code.

**Ind 55.68 Outdoor theaters.** (1) **DEFINITION AND SCOPE.** For the purpose of this code, an outdoor theater is a place of outdoor assembly used for the showing of plays, operas, motion pictures and similar forms of entertainment in which the audience views the performance from self-propelled vehicles parked within the theater enclosure. The requirements of this section shall apply to outdoor theaters now in existence and to outdoor theaters hereafter constructed, except as provided in paragraph 5.

(2) **ENTRANCES AND EXITS.** All entrances and exits for outdoor theaters shall comply with the regulations of the state highway com-

mission for driveways from property abutting state highways and the following additional requirements:

(a) Not more than one entrance shall be provided for each access road but each such entrance may be divided into 2 roadways and channelized to properly provide for vehicles turning right or left from the highway.

(b) That portion of an entrance or exit lying within the highway right-of-way shall comply with the regulations of the authority in charge of the maintenance of the highway or in the event this authority has no regulation, it shall comply with regulations prescribed by the state highway commission.

(c) Not more than one exit shall be provided for each access highway but such exit may be suitably channelized to provide for right and left turns to the highway, and not more than one traffic lane shall be permitted for each traffic lane on the highway available to vehicles leaving the theater.

(3) VEHICLE STORAGE. (a) Sufficient area shall be provided between the highway and the ticket booth to provide storage space for vehicles equal to not less than 10 per cent of the theater capacity. In all cases, sufficient storage space shall be provided so the vehicles will not back up on the traveled way of the highway. Storage area shall be calculated on the basis of 162 square feet per vehicle.

(b) A hold-over storage area having sufficient capacity to accommodate not less than 15% of the theater capacity shall be provided between the ticket booth and the ramp area.

(4) TOWER CONSTRUCTION. The tower supporting the motion picture screen shall be designed to resist a horizontal wind pressure of not less than 30 pounds for every square foot of exposed surface.

(5) LOCATION OF TOWER. The screen shall be so oriented that the picture is not visible from any major highway. This requirement does not apply to towers erected prior to January 1, 1952.

(6) CONCESSION AND MOTION PICTURE MACHINE BOOTH. The motion picture booth and equipment shall comply in all respects with the requirements of sections Ind 55.40-Ind 55.49, inclusive, of this code.

(a) Concession buildings in connection with outdoor theaters shall comply with the requirements of Chapter 54 of this code.

(7) SANITARY EQUIPMENT. Separate toilet rooms shall be provided for males and females in connection with all outdoor theaters as required by section Ind 55.32. Toilet rooms and equipment shall comply in all respects with the requirements of sections Ind 52.50-Ind 52.64 of this code. ✓

(a) In determining the number of fixtures required for toilet rooms in connection with outdoor theaters, the capacity of the theater is established by allowing  $2\frac{1}{4}$  persons for each vehicle accommodated, exclusive of vehicles parked in the waiting or hold-over area.

(b) Where the public toilet rooms are so located that the patrons must cross the ramp area in order to reach the toilet rooms, a suitable approach or passageway leading thereto shall be maintained. Such passageways shall be properly lighted and they shall be kept free from obstructions.

(8) **RAMPS AND SPEAKER EQUIPMENT.** (a) Ramps shall be spaced not less than 38 feet apart. The ramps shall be so designed that any vehicle can move from its parked position to the exit driveway without being required to back up.

(b) All ramps, parking areas, entrance and exit driveways shall be properly surfaced with a gravel surfacing or better, adequate to withstand the weight of the vehicles accommodated.

(c) An individual speaker shall be provided for each vehicle accommodated in the ramp area. All speakers shall be equipped with sufficient cord to permit the speaker to be placed inside the vehicle.

(d) Where additional seating space is provided in the theater enclosure for patrons using public transportation facilities, the speaker arrangement shall be such that the sound will be confined to the immediate seating area and not broadcast beyond the theater enclosure.

(e) There shall not be less than 18 feet distance between speaker posts, measured parallel to the ramps, except in seated areas for patrons using public transportation. All electrical wiring and electrical equipment shall be installed in accordance with the provisions of the Wisconsin state electrical code. Each speaker post shall be wired with wire approved for underground use laid in trenches not less than 12 inches in depth.

(9) **LIGHTING.** All entrance and exit driveways shall be adequately lighted and properly marked to avoid congestion and confusion and shall remain lighted throughout the performance and until the audience has left the area.

(10) **SPEED LIMIT.** In every outdoor theater, notices of a permanent character shall be prominently displayed designating the maximum speed limit permitted for cars driven within the area. Parking lights shall be used when cars are moving in the theater enclosure.

(11) **RUNNING OF ENGINES.** At each performance, an instructive trailer shall be shown on the screen informing the patrons of the danger of carbon monoxide poisoning when the engine is running and stating that when it becomes necessary to run the engine, the windows of the vehicle should be opened at least one inch.