

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

STATE FIRE SAFETY BOARD

NEW AND EXISTING SCHOOL, COLLEGE, AND UNIVERSITY FIRE SAFETY

(By authority conferred on the state fire safety board by section 3c of Act No. 207 of the Public Acts of 1941, as amended, and Executive Reorganization Order No. 1997-2, being §§29.3c and 29.451 of the Michigan Compiled Laws)

PART 1. GENERAL PROVISIONS

R 29.1901 Applicability.

Rule 1. These rules apply to all new and existing school, college, and university facilities used for instructional purposes as defined in these rules.

History: 1998-2000 AACCS.

R 29.1902 Life safety code; adoption by reference.

Rule 2. The provisions of chapters 1 to 7, 8, 9, 10, 11, 26, 27, 32, and 33 of national fire protection association pamphlet no. 101, 1997 edition, entitled "Life Safety Code," are adopted by reference as part of these rules. Copies of the adopted provisions are available for inspection and distribution through the State Fire Safety Board, Michigan Department of Consumer and Industry Services, Office of Fire Safety, 7150 Harris Drive, Lansing, Michigan 48913, or from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, Massachusetts 02269-9101, telephone number 1-800-344-3555. The cost of the provisions as of the time of adoption of these rules is \$44.50.

History: 1998-2000 AACCS.

R 29.1903 Definitions.

Rule 3. As used in these rules:

(a) "Act" means Act No. 207 of the Public Acts of 1941, as amended, being S29.1 et seq. of the Michigan Compiled Laws.

(b) "Authority having jurisdiction" means the director of the department of consumer and industry services, an employee of the department of consumer and industry services appointed by the director to implement the act, or an employee of a city, village, or township delegated authority to enforce the code under section 2b of the act.

(c) "Central heating plant" means a fuel-fired heating system that serves more than 1 room.

(d) "Code" means national fire protection association pamphlet no. 101, 1997 edition, entitled "Life Safety Code."

(e) "College" or "university" means a building or part of a building which is used for instructional purposes, which is occupied by 6 or more students and used 4 or more hours per day or more than 12 hours per week, and which is owned or leased by, or under the control of, a junior college, community college, college, or university that is duly authorized to grant degrees by 1 of the following:

(i) Article VIII of the Michigan Constitution of 1963.

(ii) The Michigan legislature.

(iii) Action by the state board of education.

(f) "Cosmetic remodeling" means surface changes solely to the wall, floor, and ceiling that do not decrease the fire rating of the wall, floor, or ceiling, including the replacement of windows and doors.

(g) "Level of exit discharge" means a floor or floors of a building that exit directly to the outside at grade. A floor that is not more than 4 feet above or below grade at exit discharge is a level of exit discharge.

(h) "Maintenance" means repair required to keep a building and its component parts in an operative condition at all times, including the replacement of its component parts when, for any reason, the component parts are no longer dependable. "Maintenance" does not include remodeling.

(i) "Open court" means a court that is open and unobstructed on at least 1 side by a minimum of 15 feet in width and 10 feet in height. The opening shall lead to a public way.

(j) "Penthouse" means an enclosed structure which has a definite floor, wall, and roof structure anchored to the building, which is located above the roof of a building, and which occupies not more than 1/3 of the roof area. A penthouse is not a story, but is part of the story below. A prefabricated weather enclosure around mechanical equipment for protection from the elements is not a penthouse or a story.

(k) "Remodeling" means an alteration or change of fire-rated assembly, or the installation of new equipment required by these rules.

(l) "Room" means a space or area bounded by any obstruction to egress that, at any time, encloses more than 80% of the perimeter of the space or area. An opening that is less than 3 feet clear wide and less than 6 feet 8 inches high shall not be considered in computing the unobstructed perimeter. A vestibule that is used for weather protection is not a room for the purposes of these rules.

(m) "Room, interior" means a room in which the only means of egress is through an adjoining or intervening room that does not meet the requirements for an exit.

(n) "School" means a building or part of a building which is owned or leased by, or under the control of, a public or private school or school system for the purpose of instruction as required by section 1561 of Act No. 451 of the Public Acts of 1976, as amended, being §380.1561 of the Michigan Compiled Laws, which is occupied by 6 or more students, and which is used 4 or more hours per day or more than 12 hours per week.

History: 1998-2000 AACCS.

R 29.1904 Plans and specifications.

Rule 4. (1) A school, college, university, or designated representative shall submit plans and specifications to the office of fire safety for all projects that involve construction, remodeling, or an addition. Construction shall not commence until office of fire safety approval has been received in writing.

(2) A school, college, or university need not submit plans and specifications to the office of fire safety for maintenance functions or cosmetic remodeling; however, a school, college, or university shall ensure that all work is in compliance with these rules.

(3) Plans and specifications for work that involves the practice of architecture or engineering, as defined in Act No. 299 of the Public Acts of 1980, as amended, being §339.101 et seq. of the Michigan Compiled Laws, and known as the occupational code, shall bear the seal of an architect or professional engineer who is registered under Act No. 299 of the Public Acts of 1980, as amended. This subrule does not apply to construction, remodeling, or an addition for which the contemplated expenditure for the completed project is less than \$15,000.00, as specified in section 2011 of Act No. 299 of the Public Acts of 1980, as amended, being §339.2011 of the Michigan Compiled Laws.

(4) Plans and specifications shall contain all of the following information, as applicable:

(a) A complete floor plan and layout of the building drawn accurately to scale.

(b) The use of each room.

(c) The dimensions of each room.

(d) The size, location, direction of swing, and fire rating of each door and frame assembly.

(e) The size and location of windows.

(f) The wall construction, including the fire-resistance rating.

(g) The type of construction as identified in national fire protection association pamphlet no. 220, 1995 edition, entitled "Standard on Types of Building Construction."

(h) The number of stories, including basement and attic areas.

(i) The interior finish classification.

(j) The location of fuel-fired equipment.

(k) The type of furnace and water heater.

(l) Air-handling systems.

(m) Fire detection and alarm systems.

(n) Sprinkler or other suppression systems.

- (o) The type, size, and location of fire extinguishers.
- (p) Other pertinent information that is required to determine compliance with these rules.
- (5) A firm certified in compliance with section 26 of the act shall submit fire alarm/detection system and fire suppression system plans to the office of fire safety in compliance with the act. The certified firm shall submit the complete shop drawings to, and receive approval from, the office of fire safety before installation of either a fire alarm or fire suppression system.
- (6) Plan approval that is given before the effective date of these rules terminates 6 months after the effective date of these rules if construction has not started. However, upon written request to the office of fire safety, the office may grant approval for a specific instance.
- (7) An architect or engineer who seals plans and who ceases to be the architect or engineer of record before completion of a project shall notify the office of fire safety in writing. Construction shall not continue until a new architect or engineer of record identifies himself or herself in writing to the office of fire safety.

History: 1998-2000 AACCS.

R 29.1905 Inspection during construction; approval for occupancy.

Rule 5. (1) During construction, addition, or remodeling, the architect, professional engineer, or owner's representative shall notify the office of fire safety, in writing, when the building is ready for inspection as follows:

- (a) When the building is enclosed and mechanical systems are substantially complete, but before concealment.
- (b) Upon completion of construction.
- (2) A person shall not occupy a newly constructed facility or a facility that is being remodeled or added to, in whole or in part, without the approval of the office of fire safety.

History: 1998-2000 AACCS.

R 29.1906 Projects affecting outside configuration of building; site plan and specifications; office of fire safety or local fire department specifications; fire safety measures during construction.

Rule 6. (1) For projects that involve construction, addition, or remodeling that affects the outside configuration of a building, and as part of the building plans and specifications otherwise required by these rules and before construction, the owner or the owner's authorized representative shall provide the office of fire safety and the local fire department with a site plan and specifications that detail all of the following information, as applicable:

- (a) The available water supply.
- (b) Hydrant locations.
- (c) Vehicle access routes.
- (d) Fire lanes.
- (2) During construction, the school, college, university, or designated representative shall take appropriate fire safety measures, including the provision of fire extinguishers and the establishment of access routes to the building that can be traveled by fire department vehicles.

History: 1998-2000 AACCS.

R 29.1907 Electrical equipment; inspections; certificate.

Rule 7. (1) A person shall install electrical wiring and equipment, including an emergency supply if installed, in compliance with the applicable provisions of R 408.30801 et seq. of the Michigan Administrative Code. Copies of the rules are available from the Michigan Department of Consumer and Industry Services, Bureau of Construction Codes, P.O. Box 30255, Lansing, Michigan 48909.

(2) An electrical inspection authority acceptable to the office of fire safety shall make an electrical inspection. The electrical inspection authority shall issue a final certificate of compliance covering

the installation. The school, college, university, or designated representative shall provide a copy of the certificate to the office of fire safety.

History: 1998-2000 AACCS.

R 29.1908 Universal amendments.

Rule 8. Sections 1-3.11.1, 1-7.1, 6-4.3, 7-1.1, 7-4.2, 7-4.3, 7-6.3.2, and 7-6.4 of the code are amended and sections 7-1.2, 7-4.4, 7-4.5, 7-4.7, 7-4.8, 7-6.5.3, 8-1.2.5.2, and 9-1.2.5.2 of the code are deleted to read as follows:

1-3.11.1. A person may occupy a building or portion of a building during construction, repair, alterations, or additions only if all means of egress and all fire protection features in the building and on-site are in place and continuously maintained for the part occupied and if the occupied portion is separated from the part under construction by a wall that has a 1-hour-fire-resistance rating. The temporary 1-hour-rated wall that is used for separation may be constructed of combustible material. Instead of having all means of egress and fire protection features in place, the school, college, university, or designated representative may take other measures that would provide equivalent safety if approved by the office of fire safety.

1-7.1. The school, college, university, or designated representative shall conduct fire exit drills in compliance with the act. The school, college, university or designated representative shall ensure that drills are designed in cooperation with the local fire authorities.

6-4.3. The school, college, university, or designated representative shall store and handle flammable and combustible liquids in compliance with rules promulgated under the act.

7-1.1. The school, college, university, or designated representative shall ensure that equipment which utilizes gas and related gas piping is installed in compliance with the provisions of national fire protection association pamphlet no. 54, 1996 edition, entitled "National Fuel Gas Code," or rules promulgated under the act, as applicable.

Exception: Existing installations may be continued in service subject to approval by the authority having jurisdiction.

7-1.2. Deleted.

7-4.2. The school, college, university or designated representative shall ensure that new elevators, escalators, dumbwaiters, and moving walks are installed in compliance with R 408.8101 et seq. of the Michigan Administrative Code.

7-4.3. The school, college, university, or designated representative shall ensure that existing elevators, escalators, dumbwaiters, and moving walks are in compliance with R 408.8101 et seq. of the Michigan Administrative Code.

7-4.4. Deleted.

7-4.5. Deleted.

7-4.7. Deleted.

7-4.8. Deleted.

7-6.3.2. The school, college, university, or designated representative shall ensure that notification is provided by audible and visible signals that are in compliance with sections 7-6.3.3 through 7-6.3.10 of the code.

Exception no. 1: Where permitted by sections 8 through 32 of the code, a presignal system is permitted when the initial fire alarm signal is automatically transmitted without delay to a municipal fire department or a fire brigade and to an on-site staff person who is trained to respond to a fire emergency.

Exception no. 2: Where permitted by sections 8 through 32 of the code, a positive alarm sequence is permitted if it is in compliance with the provisions of the national fire protection association pamphlet no. 72, 1996 edition, entitled "National Fire Alarm Code," which is adopted by reference in these rules.

7-6.4. (1) Where required by another section of the code, emergency forces notification shall be provided to alert the municipal fire department and fire brigade, if provided, of fire or other emergency.

(2) Where fire department notification is required by another section of the code, the school, college, university, or designated representative shall ensure that the fire alarm system is arranged to transmit the alarm automatically by any of the following means acceptable to the authority

having jurisdiction and in accordance with national fire protection association pamphlet no. 72, 1996 edition, entitled "National Fire Alarm Code," which is adopted by reference in these rules:

- (a) An auxiliary alarm system.
- (b) A central station connection.
- (c) A proprietary system.
- (d) A remote station connection.

(3) A facility is in compliance if it has written policy and procedure that is approved by the authority having jurisdiction. The policy and procedure shall provide for all of the following:

(a) The designation of a staff member on each shift to be responsible for notifying a local fire department.

(b) The availability at all times of a nonpay telephone for employees who are designated under subdivision (a) of this subrule to notify a local fire department.

(c) That the telephone number of the local fire department is conspicuously posted near the telephone.

(d) A requirement that notification of the fire department is incorporated into all fire drills.

7-6.5.3. Deleted.

8-1.2.5.2. Deleted.

9-1.2.5.2. Deleted.

History: 1998-2000 AACCS.

R 29.1909 Fire reporting.

Rule 9. After the occurrence of a fire that results in loss of life or property or in personal injury, the administrative authority of the facility shall immediately notify the local fire department of all details of the fire.

History: 1998-2000 AACCS.

R 29.1910 Rescission.

Rule 10. R 29.301 to R 29.321 of the Michigan Administrative Code are rescinded.

History: 1998-2000 AACCS.

PART 2. SCHOOLS

R 29.1921 Life safety code; adoption by reference of standards for existing schools.

Rule 21. The provisions of chapters 1 to 7, 9, 11, and 33 of the code that apply to existing educational occupancies, except for the amendments specified in these rules, are adopted by reference in these rules. Copies of the adopted provisions are available for inspection and distribution through the State Fire Safety Board, Department of Consumer and Industry Services, Office of Fire Safety, 7150 Harris Drive, Lansing, Michigan 48913, or from the National Fire Protection Association, 1 Batterymarch Park, Quincy, Massachusetts 02269, telephone number 1-800-344-3555. The cost of the adopted provisions as of the time of adoption of these rules is \$44.50.

History: 1998-2000 AACCS.

R 29.1922 Amendments.

Rule 22. Sections 11-1.2.1, 11-1.4.2, 11-1.6, 11-2.1.2, 11-2.11.1, 11-3.4.1, 11-3.6, 11-3.7.1, and 11-7.1.1 of the code are amended, sections 11-7.1.2, 11-7.1.2.1, 11-7.1.2.2, and 11-7.4 of the code are deleted, and sections 11-1.6.1, 11-1.6.1.1, 11-3.6.1, and 11-3.6.2 are added to the code, to read as follows:

11-1.2.1. If other types of occupancies occur in the same building that houses an educational occupancy, then either of the following provisions shall apply:

(a) The school or designated representative shall ensure that the mixed uses are completely separated, both horizontally and vertically, by fire separation walls or floor ceiling assemblies, or both. The walls and assemblies shall have a minimum 2-hour-fire-resistance rating.

(b) The school or designated representative shall apply the provisions of the code for the more restrictive of the separate occupancies to the entire facility in compliance with section 4-1.12 of the code.

11-1.4.2. Educational occupancies shall not include any of the following:

(a) A part or full-day preschool.

(b) A daycare center.

(c) A kindergarten-only building.

(d) A building that houses a combination of preschool and kindergarten.

(e) A building that houses a combination of daycare and kindergarten.

Exception: A building in which kindergarten classrooms are operated under the authority of a public school system.

11-1.6. A multistory school building constructed before August 1, 1989, shall have all structural members protected by a minimum 1-hour-fire-rated assembly.

Exception no. 1: A totally sprinkle red building that is not more than 2 stories may have unprotected structural members.

Exception no. 2: An existing school building that was constructed and approved before May 15, 1973, shall have all fire protection features required at the time of construction maintained as a minimum level of protection.

11-1.6.1. A school building constructed on or after August 1, 1989, is limited to the following construction types, heights, and areas per floor:

Construction Type.....Allowable Height/Area I (443).....No limit.

I (332).....No limit.

II (222).....5 stories/34,200 square feet.

II (111).....3 stories/22,500 square feet.

II (000).....2 stories/14,400 square feet.

III (211).....3 stories/19,800 square feet.

III (200).....2 stories/14,400 square feet.

IV (2HH).....3 stories/21,600 square feet.

V (111).....1 story/15,300 square feet.

V (000).....1 story/7,200 square feet.

Exception no. 1: If a school building is completely protected by an automatic fire suppression system, then floor areas may be increased by 200% for 1 and 2-story buildings and 100% for buildings that are more than 2 stories.

Exception no. 2: If a school building is completely protected by an automatic fire suppression system, then a building may be 1 story higher than allowed in the table specified in this section.

Exception no. 3: If each classroom has at least 1 door that leads directly to the exterior at grade, then floor areas may be increased by 200%.

11-1.6.1.1. For the purpose of section 11-1.6.1 of the code, a person shall count the number of stories starting with the primary level of exit discharge and ending with the highest occupiable level. For the purpose of this section, the primary level of exit discharge of a building is the floor that is level with or above finished grade of the exterior wall line for 50% or more of the building perimeter. A person shall not count the building level below the primary level as a story in determining the height of a building.

11-2.1.2. The school or designated representative shall ensure that rooms normally occupied by preschool, kindergarten, or first-grade pupils are not located above or below the story of exit discharge. The school or designated representative shall ensure that rooms normally occupied by second-grade pupils are not located more than 1 story above the story of exit discharge.

Exception: Rooms in school buildings constructed before August 1, 1989.11-2.11.1. Every room or space which is more than 250 square feet (23.2 square meters) and which is used for classroom or other educational purposes or is normally subject to student occupancy shall have at least 1 outside window for emergency rescue or ventilation. The window shall be openable from the inside without the use of tools and shall provide a clear opening of not less than 20 inches (50.8 centimeters) in width, 24 inches

(61 centimeters) in height, and 5.7 square feet (53 square meters) in area. The clear opening shall permit a rectangular solid that has a minimum width and height which provide the required 5.7 square feet opening and a minimum depth of 20 inches to pass fully through the opening. The bottom of the opening shall be not more than 44 inches (112 centimeters) above the floor. The school or designated representative shall ensure that windows designated as emergency windows are identified by a permanent durable and legible sign which is securely fastened at a conspicuous location and which has letters that are not less than 5/8 of an inch high and 1/8 of an inch wide. Windows that open onto an open court, as defined in the code, are acceptable.

Exception no. 1: In buildings protected throughout by an approved automatic sprinkler system in compliance with section 7-7 of the code.

Exception no. 2: If the room or space has a door leading directly to the outside of the building.

Exception no. 3: In rooms located more than 3 stories above grade, the openable clear height, width, and area of the window may be modified to the dimensions necessary for ventilation.

Exception no. 4: Awning or hopper-type windows that are hinged or subdivided to provide a clear opening which is not less than 600 square inches (3900 square centimeters) in area and which does not have any dimension less than 22 inches (55.9 centimeters) may be continued in use. Screen walls or devices in front of required windows shall not interfere with normal rescue requirements.

Exception no. 5: If the room or space is in compliance with all of the following provisions:

(a) Doors exist that allow travel between adjacent classrooms and, when used to travel from classroom to classroom, provide direct access to exits in both directions or direct access to an exit in 1 direction and to a separate smoke compartment that provides access to another exit in the other direction.

(b) The corridor is separated from the classrooms by a wall that resists the passage of smoke, and all doors between the classrooms and the corridor are self-closing or automatic-closing in compliance with section 5-2.1.8 of the code.

(c) The length of travel to exits specified in subdivisions (a) and (b) of this exception is not more than 150 feet (45 meters).

(d) Each communicating door is marked in compliance with section 5-10 of the code.

(e) A locking device is not allowed on the communicating doors.

Exception no. 6: A school building constructed before August 1, 1989, that is in compliance with both of the following provisions:

(a) The windowless section of the floor is not more than 25% of the total area of the story, excluding corridors.

(b) All windowless rooms, spaces, and public assembly places have 50% of their required exits visible directly to the exterior of the building and within 20 feet from the door of the occupied room.

11-3.4.1. The school or designated representative shall ensure that an educational occupancy is provided with a fire alarm system in compliance with section 7-6 of the code.

Exception: A 1-room educational building that is located not less than 25 feet from another school building and not less than 10 feet from another 1-room educational building at any point.

11-3.6. Interior corridors.

11-3.6.1. The school or designated representative shall ensure that every interior corridor is constructed of fire barriers that have not less than a 1-hour-fire-resistance rating in compliance with section 6-2.3 of the code.

Exception no. 1: A corridor is not required if all spaces normally subject to student occupancy have at least 1 door opening directly to the outside or to an exterior exit access balcony or corridor in compliance with section 11-2.5.6 of the code.

Exception no. 2: In a building protected throughout by an approved automatic sprinkler system with valve supervision installed in compliance with section 7-7 of the code, corridor walls are not required to be rated if the walls, in conjunction with openings in the walls, and ceilings at which the corridor walls terminate, resist the passage of smoke.

Exception no. 3: Existing doors may be 1 3/4-inch (4.4 centimeters) thick solid bonded wood core doors or the equivalent.

Exception no. 4: Lavatories need not be separated from corridors if the lavatories are separated from all other spaces by fire barriers that have a 1-hour-fire-resistance rating in compliance with section 6-2.3 of the code.

Exception no. 5: In a school building constructed before August 1, 1989, every interior corridor, including corridors in flexible plan buildings, shall be constructed to be reasonably smoke-tight.

Exception no. 6: In a school building which was constructed before August 1, 1989, and which is protected throughout by an approved automatic sprinkler system installed in compliance with section 7-7 of the code, corridor walls are not required.

11-3.6.2. The school or designated representative shall ensure that clothing and personal effects are not stored in corridors and lobbies.

Exception: Metal lockers with doors are permitted in corridors for storing clothing and personal effects if the required corridor width is maintained.

11-3.7.1. The school or designated representative shall ensure that a school building is subdivided into compartments by smoke barriers that are in compliance with section 6-3 of the code if either of the following provisions applies:

(a) The maximum area of a compartment, including the aggregate area of all floors that have a common atmosphere, is more than 30,000 square feet (2,800 square meters).

(b) The length or width of the building is more than 300 feet (91 meters).

Exception no. 1: If all classrooms have exterior exit access in compliance with section 5-5.3 of the code.

Exception no. 2: A building that is protected throughout by an approved automatic sprinkler system in compliance with section 7-7 of the code.

Exception no. 3: A school building constructed before August 1, 1989.

11-7.1.1. The school or designated representative shall conduct fire exit drills regularly in compliance with the applicable provisions of the following paragraphs and with the provisions of the act.

11-7.1.2. Deleted.

11-7.1.2.1. Deleted.

11-7.1.2.2. Deleted.

11-7.4. Deleted.

History: 1998-2000 AACCS.

R 29.1923 Life safety code; adoption by reference of standards for new schools.

Rule 23. The provisions of chapters 1 to 7, 8, 10, and 33 of the code that apply to new educational occupancies, except for the amendments specified in these rules, are adopted by reference in these rules. Copies of the adopted provisions are available for inspection and distribution through the State Fire Safety Board, Department of Consumer and Industry Services, Office of Fire Safety, 7150 Harris Drive, Lansing, Michigan 48913, or the National Fire Protection Association, 1 Batterymarch Park, Quincy, Massachusetts 02269, telephone number 1-800-344-3555. The cost of the adopted provisions as of the time of adoption of these rules is \$44.50 per copy.

History: 1998-2000 AACCS.

R 29.1924 Amendments.

Rule 24. Sections 10-1.1.1, 10-1.2.1, 10-1.4.2, 10-1.6, 10-1.7.1, 10-2.2.2.4, 10-2.11.1, 10-3.3.1, 10-3.4.1, 10-3.4.2.1, 10-3.6, and 10-7.1.1 of the code are amended, sections 10-7.1.2, 10-7.1.2.1, 10-7.1.2.2, and 10.7.4 of the code are deleted, and sections 10-1.6.1, 10-3.2.3.1, 10-3.4.4, 10-3.4.5, 10-3.6.1, and 10-3.6.2 are added to the code, to read as follows:

10-1.1.1. The requirements of this section apply to all of the following:

(a) New buildings or portions of new buildings used as educational occupancies.

(b) Additions made to, or used as, an educational occupancy.

(c) Alterations, modernizations, or renovations of existing educational occupancies. If the renovation or alteration involves more than 50% of the total floor area of the facility, then the entire facility shall comply with requirements of these rules for new educational occupancies.

(d) An existing building or a portion of an existing building upon change of occupancy to an educational occupancy.

10-1.2.1. If other types of occupancies occur in the same building that houses an educational occupancy, then either of the following provisions shall apply:

(a) The school or designated representative shall ensure that the mixed occupancies are completely separated, both horizontally and vertically, by fire separation walls or floor ceiling assemblies, or both. The walls and assemblies shall have a minimum 2-hour-fire-resistance rating.

(b) The school or designated representative shall apply the provisions of the code for the more restrictive of the separate occupancies to the entire facility in compliance with section 4-1.12 of the code.

10-1.4.2. Educational occupancies shall not include any of the following:

- (a) A part or full-day preschool.
- (b) A daycare center.
- (c) A kindergarten-only building.
- (d) A building that houses a combination of preschool and kindergarten.
- (e) A building that houses a combination of daycare and kindergarten.

Exception: A building in which kindergarten classrooms are operated under the authority of a public school system.

10-1.6. A school building is limited to the following construction types, heights, and areas per floor:

Construction Type.....	Allowable Height/Area I (443).....	No limit.
I (332).....	No limit.	
II (222).....	5 stories/34,200 square feet.	
II (111).....	3 stories/22,500 square feet.	
II (000).....	2 stories/14,400 square feet.	
III (211).....	3 stories/19,800 square feet.	
III (200).....	2 stories/14,400 square feet.	
IV (2HH).....	3 stories/21,600 square feet.	
V (111).....	1 story/15,300 square feet.	
V (000).....	1 story/7,200 square feet.	

Exception no. 1: If a school building is completely protected by an automatic fire suppression system, then tabular floor areas may be increased by 200% for 1 and 2-story buildings and 100% for a building that is more than 2 stories.

Exception no. 2: If a school building is completely protected by an automatic fire suppression system, then a building may be 1 story higher than allowed in the table specified in this section.

Exception no. 3: If every student-occupied room has at least 1 door that leads directly to the exterior at grade, then tabular floor areas may be increased by 200%.

Exception no. 4: If a building or structure has more than 25% of the building perimeter fronting on a street or other unoccupied space, then tabular floor areas may be increased 2% for each 1% of the excess frontage. The unoccupied space shall be on the same lot or the unoccupied space shall be on ground dedicated for public use; shall not be less than 30 feet in width; and shall be accessible from a street by a posted fire lane that is not less than 18 feet in width.

10-1.6.1. For the purpose of section 10-1.6 of the code, a person shall count the number of stories starting with the primary level of exit discharge and ending with the highest occupiable level. For the purpose of this section, the primary level of exit discharge of a building is the floor that is level with or above finished grade of the exterior wall line for 50% or more of the building perimeter. A person shall not count a building level below the primary level as a story in determining the height of a building.

10-1.7.1. The school or designated representative shall determine the occupant load, specified in number of persons for whom means of egress and other requirements are to be provided, on the basis of the following occupant load factors or the maximum probable population of any room or section under consideration, whichever is greater:

- (a) Classrooms: 1 person for every 20 net square feet (1.9 net square meters).
- (b) Shops, laboratories, and similar vocational rooms: 1 person for every 50 net square feet (4.6 net square meters).
- (c) Locker rooms: 1 person per 7 square feet of net area, or 1 person for every 15 square feet of gross area, including all adjacent spaces such as showers, toilets, and drying rooms.

10-2.2.2.4. The school or designated representative shall ensure that any exit door that is designed to normally be kept closed is in compliance with section 5-2.1.8 of the code. The school or designated representative shall ensure that the automatic sprinkler system, the fire alarm system, and the systems

required by section 5-2.1.8(c) of the code, if provided, are arranged to initiate the closing action of all exit doors specified in this section, by zone or throughout the entire facility.

Exception: A door in a boiler or heat plant room shall not be held open. 10-2.11.1. Every room or space which is more than 250 square feet (23.2 square meters) and which is used for classroom or other educational purposes or is normally subject to student occupancy shall have at least 1 outside window for emergency rescue or ventilation. The school or designated representative shall ensure that the window is openable from the inside without the use of tools and provides a clear opening of not less than 20 inches (50.8 centimeters) in width, 24 inches (61 centimeters) in height, and 5.7 square feet (53 square meters) in area. The school or designated representative shall ensure that the bottom of the opening is not more than 44 inches (112 centimeters) above the floor and that any latching device is capable of being operated from not more than 54 inches (137 centimeters) above the finished floor. The school or designated representative shall ensure that the clear opening permits a rectangular solid that has a minimum width and height which provide the required 5.7 square foot opening and a minimum depth of 20 inches to pass fully through the opening. The school or designated representative shall ensure that the windows are accessible by the fire department and open into an area that has access to a public way. Windows opening onto an open court, as defined in the code, are acceptable. The school or designated representative shall ensure that windows designated as emergency windows are identified by a permanent, durable, and legible sign which is securely fastened at a conspicuous location and which has letters that are not less than 5/8 of an inch high and 1/8 of an inch wide.

Exception no. 1: In a building protected throughout by an approved automatic sprinkler system in compliance with section 7-7 of the code.

Exception no. 2: If the room or space has a door leading directly to the outside of the building.

Exception no. 3: In a room located more than 3 stories above grade, the openable clear height, width, and area of the window may be modified to the dimensions necessary for ventilation.

Exception no. 4: If a window retrofit project is undertaken in an existing school building, then compliance with the window clear opening dimensions is not required. Unless the existing sill construction is being modified, the existing sill height can be maintained. All other requirements of this section, however, apply.

10-3.2.3.1. The school or designated representative shall ensure that any room which is used for instruction and which has 3 or more gas outlets is provided with a master gas valve which is conveniently located outside the door of the room and which is clearly marked so that the valve may be closed without having to enter the room. This requirement does not apply to home economics rooms in which the gas outlets supply stoves for cooking.

10-3.3.1. The school or designated representative shall ensure that interior finish, in compliance with section 6-5 of the code, is as follows:

(a) Exits - class A.

(b) Other than exits - class A, B, or C.

Exception: The exposed portions of structural members that are in compliance with the requirements for type IV (2HH) construction need not be in compliance with the interior finish requirements specified in this section.

10-3.4.1. The school or designated representative shall ensure that educational occupancies are provided with a fire alarm system in compliance with section 7-6 of the code.

Exception: A 1-room educational building that is located not less than 25 feet from another school building and not less than 10 feet from another 1-room educational building at any point.

10-3.4.2.1. The school or designated representative shall ensure that initiation of the required fire alarm system is by manual means in compliance with section 7-6.2.1(a) of the code. The school or designated representative shall ensure that manual fire alarm stations are provided in compliance with sections 7-6.2.3 through 7-6.2.6 of the code and at all other exterior doors in the natural path of escape whether or not the path of escape is designated a required exit by these rules.

Exception: In buildings where all normally occupied spaces are provided with a 2-way communication system between the spaces and a constantly attended receiving station from which a general evacuation alarm can be sounded, the manual pull stations are required only in locations specifically designated by the authority having jurisdiction.

10-3.4.4. The school or designated representative shall ensure that the fire alarm system provides alarm zone annunciation in compliance with the requirements of section 7-6.7 of the code.

10-3.4.5. In buildings provided with automatic sprinkler protection, the school or designated representative shall ensure that all sprinkler control valves are electrically supervised through the fire alarm system to cause an audible and visual supervisory alarm signal at a location in the building where the signal will alert responsible school personnel.

Exception: Control valves for isolated hazardous areas permitted to be connected directly to a domestic water supply where chain locking of valves is permitted.

10-3.6. The school or designated representative shall ensure that every interior corridor is separated from all use areas by construction that has a minimum 1-hour-fire-resistance rated construction in compliance with section 6-2.3 of the code.

Exception no. 1: Corridor protection is not required if all spaces normally subject to student occupancy have at least 1 door opening directly to the outside or to an exterior exit access balcony or corridor in compliance with section 10-2.5.6 of the code.

Exception no. 2: In buildings that are protected throughout by an approved supervised automatic sprinkler system installed in compliance with section 7-7 of the code, corridor walls are not required to be rated if the walls, in conjunction with openings in the walls and ceilings at which the walls terminate, resist the passage of smoke. All doors in the walls shall be 1 3/4-inch solid core wood or equivalent and shall be equipped with positive-latching hardware. Door closers are not required.

Exception no. 3: If the corridor ceiling is an assembly that has a 1-hour-fire-resistance rating when tested as a wall, then the corridor wall may terminate at the corridor ceiling.

Exception no. 4: Lavatories need not be separated from corridors if the lavatories are separated from all other spaces by fire barriers that have not less than a 1-hour-fire-resistance rating in compliance with section 6-2.3 of the code.

10-3.6.1. The school or designated representative shall ensure that all glazing in walls or doors of required fire-rated exit corridors is a minimum of 1/4-inch wired glass in steel frames and does not have a dimension that is more than 54 inches. The school or designated representative shall ensure that the maximum size of each panel is in compliance with national fire protection association pamphlet no. 80, 1995 edition, entitled "Standard for Fire Doors and Windows," which is adopted by reference in these rules.

Exception no. 1: There shall be no restriction in area and fire resistance of glass and frames in a building protected throughout by an approved automatic sprinkler system.

Exception no. 2: Alternative rated and listed glazing materials acceptable to the authority having jurisdiction are permitted.

10-3.6.2. The school or designated representative shall ensure that clothing and personal effects are not stored in corridors and lobbies.

Exception: Metal lockers with doors are permitted in corridors for storing clothing and personal effects if the required corridor width is maintained.

10-7.1.1. The school or designated representative shall conduct fire exit drills regularly in accordance with the applicable provisions of the following paragraphs and the provisions of the act.

10-7.1.2. Deleted.

10-7.1.2.1. Deleted.

10-7.1.2.2. Deleted.

10-7.4. Deleted.

History: 1998-2000 AACCS.

PART 3. COLLEGES AND UNIVERSITIES

R 29.1931 Life safety code; adoption by reference for existing colleges and universities.

Rule 31. The provisions of chapters 1 to 7, 27, and 33 of the code that apply to existing business occupancies, except for the amendments specified in these rules, are adopted by reference in these rules. Copies of the adopted provisions are available for inspection and distribution through the State Fire Safety Board, Department of Consumer and Industry Services, Office of Fire Safety, 7150 Harris Drive, Lansing, Michigan 48913, or from the National Fire Protection Association, 1 Batterymarch Park,

Quincy, Massachusetts 02269, telephone number 1-800-344-3555. The cost of the adopted provisions as of the time of adoption of these rules is \$44.50.

History: 1998-2000 AACCS.

R 29.1932 Amendments.

Rule 32. Section 27-1.6.1 is added to the code, and sections 27-1.2.1, 27-1.6, 27-2.4.2, 27-2.5.3, and 27-3.3.2 of the code are amended, to read as follows:

27-1.2.1. If other types of occupancies occur in the same building that houses an educational occupancy, then either of the following provisions shall apply:

(a) The college, university, or designated representative shall ensure that the mixed occupancies are completely separated, both horizontally and vertically, by fire separation walls or floor ceiling assemblies, or both. The wall and assemblies shall have a minimum 2-hour-fire-resistance-rating.

(b) The college, university, or designated representative shall apply the provisions of the code for the more restrictive of the separate occupancies to the entire facility in compliance with section 4-1.12 of the code.

27-1.6. All multistory college or university buildings constructed before August 1, 1989, shall have all structural members protected by a minimum of a 1-hour-fire-rated assembly.

Exception no. 1: A totally sprinklered building that is not more than 2 stories may have unprotected structural members.

Exception no. 2: An existing college or university building constructed and approved before May 15, 1973, shall have all fire protection features required at the time of construction maintained as a minimum level of protection.

27-1.6.1. A college or university building constructed on or after August 1, 1989, is limited to the following construction types, heights, and areas per floor:

Construction Type	Allowable Height/Area I (443).....	No limit.
I (332).....		No limit.
II (222).....		7 stories/34,200 square feet.
II (111).....		5 stories/22,500 square feet.
II (000).....		3 stories/14,400 square feet.
III (211).....		4 stories/19,800 square feet.
III (200).....		3 stories/14,400 square feet.
IV (2HH).....		5 stories/21,600 square feet.
V (111).....		3 stories/15,300 square feet.
V (000).....		2 stories/7,200 square feet.

Exception: If a college or university building is completely protected by an automatic fire suppression system, then floor areas may be increased by 200% for 1 and 2-story buildings and by 100% for a building that is more than 2 stories.

27-2.4.2. The college, university, or designated representative shall ensure that not less than 2 separate exits are provided on every story and are accessible from every part of every story and mezzanine.

Exception to accessibility: Exit access travel may be common for the distances allowed as common paths of travel by section 27-2.5.3 of the code.

Exception no. 1: For a room or area which has a total occupant load of less than 100 persons, which has an exit that discharges directly to the outside at the level of exit discharge for the building, and which has a total travel distance, including travel within the exit, from any point of not more than 100 feet (30 meters), a single exit is permitted. Travel shall be on the same floor level. If the traversing of stairs is required, then the stairs shall be not more than 15 feet (4.5 meters) in height, shall be provided with complete enclosures to separate the stairs from any other part of the building, and shall not have door openings. A single outside stair that is in compliance with section 5-2.2 of the code may serve all floors allowed within the 15-foot (4.5 meters) vertical travel limitation.

Exception no. 2: A business occupancy which is not more than 3 stories and which does not have an occupant load of more than 30 people per floor may have a single separate exit to each floor if the total

travel distance to the outside of the building is not more than 100 feet (30 meters) and, if the exit is enclosed in compliance with section 5-1.3 of the code, the exit does not serve other levels and discharges directly to the outside. A single outside stair that is in compliance with section 5-2.2 of the code may serve all floors.

Exception no. 3: A single means of egress is permitted from a mezzanine within a business occupancy if the common path of travel is not more than 75 feet (23 meters) or is not more than 100 feet (30 meters) and if the means of egress is protected throughout by an approved automatic sprinkler system in compliance with section 7-7 of the code.

27-2.5.3. The college, university, or designated representative shall ensure that a common path of travel is not more than 75 feet (23 meters).

Exception: A common path of travel is permitted for the first 100 feet (30 meters) on a story protected throughout by an approved automatic sprinkler system in compliance with section 7-7 of the code.

27-3.3.2. The college, university, or designated representative shall ensure that interior wall and ceiling finish that is in compliance with section 6-5.5 of this code is class A or class B in exits and enclosed corridors furnishing access to exits and is class A, or class B, or class C in all other areas.

History: 1998-2000 AACS.

R 29.1933 Life safety code; adoption by reference of standards for new colleges and universities.

Rule 33. The provisions of chapters 1 to 7, 26, and 33 of the code that apply to new business occupancies, except for the amendments specified in these rules, are adopted by reference in these rules. Copies of the adopted code are available for inspection and distribution at the office of the State Fire Safety Board, Office of Fire Safety, 7150 Harris Drive, Lansing, Michigan 48909 and from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, Massachusetts 02269, telephone number 1-800-344-3555. The cost of the adopted provisions as of the time of adoption of these rules is \$44.50.

History: 1998-2000 AACS.

R 29.1934 Amendments.

Rule 34. Sections 26-1.2.1, 26-1.6, 26-2.4, 26-2.5.3, 26-3.3.2, and 26-3.6.1 of the code are amended, section 26-1.2.2.2 of the code is deleted, and section 26-3.2.3.1 is added to the code, to read as follows:

26-1.2.1. If other types of occupancies occur in the same building that houses an educational occupancy, then either of the following provisions shall apply:

(a) The college, university, or designated representative shall ensure that the mixed uses are completely separated, both horizontally and vertically, by fire separation walls or floor ceiling assemblies, or both. The walls and assemblies shall have a minimum 2-hour-fire-resistance rating.

(b) The college, university, or designated representative shall apply the provisions of the code for the more restrictive of the separate occupancies to the entire facility in compliance with section 4.1.12 of the code.

26-1.2.2.2. Deleted.

26-1.6. A college or university is limited to the following construction types, heights, and areas per floor:

Construction Type	Allowable Height/Area I (443).....	No limit.
I (332).....	No limit.	
II (222).....	7 stories/34,200 square feet.	
II (111).....	5 stories/22,500 square feet.	
II (000).....	3 stories/14,400 square feet.	
III (211).....	4 stories/19,800 square feet.	
III (200).....	3 stories/14,400 square feet.	
IV (2HH).....	5 stories/21,600 square feet.	
V (111).....	3 stories/15,300 square feet.	
V (000).....	2 stories/7,200 square feet.	

Exception no. 1: If a college or university building is completely protected by an automatic fire suppression system, then floor areas may be increased by 200% for 1 and 2-story buildings and by 100% for a building that is more than 2 stories.

Exception no. 2: If a college or university building is completely protected by an automatic fire suppression system, then a building may be 1 story higher than allowed in the table specified in this section.

Exception no. 3: If every student-occupied room has at least 1 door that leads directly to the exterior at grade, then tabular floor areas may be increased by 200%.

Exception no. 4: If a building or structure has more than 25% of the building perimeter fronting on a street or other unoccupied space, then tabular floor areas may be increased 2% for each 1% of the excess frontage. The unoccupied space shall be on the same lot or the unoccupied space shall be on ground dedicated for public use; shall not be less than 30 feet in width; and shall be accessible from a street by a posted fire lane that is not less than 18 feet in width.

26-2.4. The college, university, or designated representative shall ensure that not less than 2 separate exits are provided on every story and are accessible from every part of every story and mezzanine.

Exception to accessibility: Exit access travel may be common for distances allowed as common paths of travel by section 26-2.5.3 of the code.

Exception no. 1: For a room or area which has a total occupant load of less than 100 persons, which has an exit that discharges directly to the outside at the level of exit discharge for the building, and which has a total travel distance, including travel within the exit, from any point of not more than 100 feet (30 meters), a single exit is permitted. Travel shall be on the same floor level. If the traversing of stairs is required, then the stairs shall be not more than 15 feet (4.5 meters) in height, shall be provided with complete enclosures to separate the stairs from any other part of the building, and shall not have door openings. A single outside stair that is in compliance with section 5-2.2 of the code may serve all floors allowed within the 15-foot (4.5 meters) vertical travel limitation.

Exception no. 2: A business occupancy which is not more than 3 stories and which does not have an occupant load of more than 30 people per floor may have a single separate exit to each floor if the total travel distance to the outside of the building is not more than 100 feet (30 meters) and, if the exit is enclosed in compliance with section 5-1.3 of the code, the exit does not serve other levels and discharges directly to the outside. A single outside stair that is in compliance with section 5-2.2 of the code may serve all floors.

Exception no. 3: A single means of egress is permitted from a mezzanine within a business occupancy if the common path of travel is not more than 75 feet (23 meters) or is not more than 100 feet (30 meters) and if the means of egress is protected throughout by an approved automatic sprinkler system in compliance with section 7-7 of the code.

26-2.5.3. The college, university, or designated representative shall ensure that a common path of travel is not more than 75 feet (23 meters).

Exception: A common path of travel is permitted for the first 100 feet (30 meters) in a building protected throughout by an approved supervised automatic sprinkler system in compliance with section 7-7 of the code.

26-3.2.3.1. The college, university, or designated representative shall ensure that any room which is used for instruction and which has 3 or more gas outlets is provided with a master gas valve which is conveniently located outside the door of the room and which is clearly marked so that the valve may be closed without having to enter the room.

26-3.3.2. The college, university, or designated representative shall ensure that interior wall and ceiling finish in compliance with section 6-5.5 of the code is class A or class B in exits and enclosed corridors furnishing access to exits and is class A, or class B, or class C in all other areas.

26-3.6.1. If access to exits is provided by corridors, then the college, university, or designated representative shall ensure that the corridors are separated from use areas by fire barriers that have a fire-resistance rating of at least 1 hour in compliance with section 6-2.3 of the code.

Exception no. 1: If exits are available from an open floor area.

Exception no. 2: In a building protected throughout by an approved, automatic sprinkler system installed in compliance with section 7-7 of the code, the college, university, or designated representative shall ensure that corridors are separated from all other use areas by reasonably smoke-tight construction.

Exception no. 3: Lavatories need not be separated from corridors if the lavatories are separated from all other spaces by fire barriers that have not less than a 1-hour-fire-resistance rating in compliance with section 6-2.3 of the code.

History: 1998-2000 AACCS.