

MINNESOTA RULES 1987

105 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.0150

CHAPTER 1305 DEPARTMENT OF ADMINISTRATION MINNESOTA STATE BUILDING CODE AMENDMENTS TO THE UNIFORM BUILDING CODE

1305.0100	ADOPTION OF THE UNIFORM BUILDING CODE BY REFERENCE.	1305.3300	ONE AND TWO FAMILY DWELLING CODE, SECTION R-211.
1305.0150	REQUIRED AND OPTIONAL PROVISIONS.	1305.3400	SECTION 1201.
1305.0200	SECTIONS 101, 102, AND 103.	1305.3600	SECTION 1205.
1305.0300	SECTION 104.	1305.3700	SECTION 1210.
1305.0400	SECTION 203.	1305.3800	SECTION 1213.
1305.0500	SECTION 204.	1305.3900	NEW SECTION 1214.
1305.0600	SECTION 205.	1305.4100	SECTION 1711.
1305.0700	SECTION 301.	1305.4200	SECTION 1712.
1305.0800	SECTION 304.	1305.4500	SECTION 1807.
1305.0900	SECTION 305.	1305.4600	SECTION 2303.
1305.1000	SECTION 307.	1305.4700	SECTION 2305.
1305.1100	SECTION 405.	1305.4800	SECTION 2311.
1305.1200	SECTION 406.	1305.4850	SECTION 2311.
1305.1300	SECTION 407.	1305.4900	SECTION 2312.
1305.1350	SECTION 414.	1305.5200	SECTION 2501.
1305.1400	SECTION 420.	1305.5300	SECTION 2510.
1305.1500	TABLE 5-A.	1305.5310	SECTION 2516.
1305.1590	SECTION 509.	1305.5320	SECTION 2517.
1305.1600	SECTION 510.	1305.5400	SECTION 2907.
1305.1700	SECTION 511.	1305.5500	SECTION 3203.
1305.1750	NEW SECTION 514.	1305.5700	SECTION 3207.
1305.1790	UBC CHAPTER 5, TABLE 5-B.	1305.5750	SECTION 3301.
1305.1795	Table 5-E, REQUIRED SANITATION FIXTURED BASED ON OCCUPANT LOAD (1) (2); TABLE 5-E.	1305.5800	SECTION 3304.
1305.1800	SECTION 605.	1305.5900	SECTION 3305.
1305.1900	SECTION 705.	1305.6000	SECTION 3321.
1305.2000	SECTION 709.	1305.6200	TABLE NO. 33-A.
1305.2100	SECTION 802.	1305.6250	SECTION 3703.
1305.2200	SECTION 805.	1305.6280	SECTION 3801.
1305.2300	SECTION 809.	1305.6300	SECTION 3802.
1305.2400	SECTION 905.	1305.6425	SECTION 3805.
1305.2500	SECTION 1001.	1305.6430	TABLE NO. 38-A.
1305.2600	SECTION 1002.	1305.6525	SECTION 3808.
1305.2700	SECTION 1005.	1305.6550	SECTION 4305.
1305.2800	SECTION 1009.	1305.6600	SECTION 4701.
1305.2900	SECTION 1101.	1305.6700	SECTIONS 5001 TO 5006.
1305.3000	SECTION 1201.	1305.6800	SECTIONS 5101 TO 5105.
1305.3100	ONE AND TWO FAMILY DWELLING CODE, SECTION R-202.	1305.6900	SECTION 6001.
1305.3200	ONE AND TWO FAMILY DWELLING CODE, SECTION R-204.	1305.6905	APPENDIX CHAPTER 38. CHAPTER 60, STANDARDS
		1305.6910	STANDARD 38-1.
		1305.6920	STANDARD 38-2.
		1305.7000	VALIDITY CLAUSE.
		1305.7100	SPECIAL PROVISIONS FOR THE CITY OF ROCHESTER.

1305.0100 ADOPTION OF THE UNIFORM BUILDING CODE BY REFERENCE.

Chapters 1 to 60 and appendixes of the 1985 edition of the Uniform Building Code as promulgated by the International Conference of Building Officials, Whittier, California, are incorporated by reference and hereby made part of the Minnesota State Building Code except as qualified by parts 1300.1900 and 1305.0150 and except as amended in parts 1305.0200 to 1305.6900.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557; 11 SR 1405*

1305.0150 REQUIRED AND OPTIONAL PROVISIONS.

Subpart 1. Required provisions. UBC Appendix Chapter 35 must be administered by any municipality.

Subp. 2. Optional provisions. The following provisions of the Uniform

1305.0150 AMENDMENTS TO THE UNIFORM BUILDING CODE 106

Building Code are not mandatory but must be adopted without change at the discretion of any municipality, except UBC Appendix Chapter 70 may be adopted with a revised fee schedule and bonding requirements.

A. UBC Appendix Chapters 1, 7, 38, 55, and 70.

B. Special Fire Suppression Systems, Optional, UBC Section 3808.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.0200 SECTIONS 101, 102, AND 103.

UBC Sections 101, 102, and 103 are deleted in their entirety.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.0300 SECTION 104.

UBC Section 104(a) is amended by changing the last sentence and adding a sentence to read: See Section 1210 for provisions requiring installation of smoke detectors in existing Group R, Division 3 or 4 occupancies. Unsafe conditions as defined in Section 203 shall be abated.

UBC Section 104(f) is amended by adding an additional item number 4 as follows:

4. All approvals must be based on the applicant's submission of complete architectural and engineering plans and specifications.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.0400 SECTION 203.

UBC Section 203 is amended to read as follows:

UBC Section 203. All buildings or structures regulated by this code which are structurally unsafe or not provided with adequate egress, or which constitute a fire hazard, or are otherwise dangerous to human life are, for the purpose of this section, unsafe. Any use of buildings or structures constituting a hazard to safety, health, or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage, or abandonment are, for the purpose of this section, unsafe uses. Parapet walls, cornices, spires, towers, tanks, statuary, and other appendages or structural members which are supported by, attached to, or part of a building and which are in deteriorated condition or otherwise unable to sustain the design loads which are specified in the code are unsafe building appendages. All unsafe buildings, structures, or appendages are public nuisances and must be abated by repair, rehabilitation, demolition, or removal in accordance with the procedures set forth in Minnesota Statutes, sections 463.15 to 463.26.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.0500 SECTION 204.

UBC Section 204 is amended by amending the last sentence as follows: The board shall adopt rules of procedures for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the building official and to the state building inspector within 15 days of the decision.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.0600 SECTION 205.

UBC Section 205 is amended by adding a sentence as follows: Any violation of provisions of this code is a misdemeanor (Minnesota Statutes, section 16B.69).

Statutory Authority: *MS s 16B.59 to 16B.73*

MINNESOTA RULES 1987

107 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.0900

1305.0700 SECTION 301.

UBC Section 301(b) is amended by the addition of item 12 as follows:

12. Agricultural buildings as defined in Minnesota Statutes, section 16B.60, subdivision 5.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.0800 SECTION 304.

Section 304, subsections (a) and (b) of the UBC are amended to read as follows:

UBC Section 304. (a) General. Fees must be assessed in accordance with the provisions of this section or must be as set forth in the fee schedule adopted by the jurisdiction.

(b) All permit fees must be established by the local authority except in areas outside of the enforcement authority of a city, the fee charged for the issuance of permits and inspections for single family dwellings may not exceed the greater of \$100 or .005 times the value of the structure, addition, or alteration. (Minnesota Statutes, section 16B.62.)

The determination of value or valuation under any of the provisions of this code must be made by the building official. The value to be used in computing the building permit and building plan review fees is the total value of all construction work for which the permit is issued as well as all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire extinguishing systems, and any other permanent equipment.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.0900 SECTION 305.

UBC Section 305(e) is amended to read as follows:

Section 305(e) Required Inspections. Reinforcing steel or structural framework of any part of any building or structure must not be covered or concealed without first obtaining the approval of the building official.

The building official, upon notification from the permit holder or his agent, shall make the following inspections and shall either approve that portion of the construction as completed or shall notify the permit holder or his agent of the ways the construction fails to comply with this code:

1. Foundation inspection: To be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms must be in place prior to inspection. All materials for the foundation must be on the job, except where concrete is ready mixed in accordance with UBC Standard No. 26-13, the concrete need not be on the job. Where the foundation is to be constructed of approved treated wood, additional inspections may be required by the building official.

2. Concrete slab or under-floor inspection: To be made after all in-slab or under-floor building service equipment, conduit, piping accessories, and other ancillary equipment items are in place but before any concrete is placed or floor sheathing installed, including the subfloor.

3. Frame inspection: To be made after the roof, all framing, fire blocking, and bracing are in place and all pipes, chimneys, and vents are complete and the rough electrical, plumbing, and heating wires, pipes, and ducts are approved.

4. Insulation inspection: To be made after all required insulation is in place but before any covering material is in place.

5. Lath and/or gypsum board inspection: To be made after all lathing and gypsum board, interior and exterior, used as a structural element or a part of a fire-resistive assembly, is in place but before any plastering is applied or before gypsum board joints and fasteners are taped and finished.

MINNESOTA RULES 1987

1305.0900 AMENDMENTS TO THE UNIFORM BUILDING CODE 108

6. Final inspection: To be made after finish grading and the building is completed and ready for occupancy.

7. Installation of manufactured homes (mobile homes): To be made after the installation of the support system and all utility service connections are in place, but before any covering material or skirting is in place. Evaluation of an approved anchoring system, when installed, is part of the installation inspection.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 9 SR 1557; 11 SR 1405

1305.1000 SECTION 307.

Section 307(a) of the UBC is amended to read as follows:

Certificate of Occupancy

Section 307(a) Use or Occupancy. No building or structure of Groups A, E, I, H, B, or R, Division 1 occupancy, shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the building official has issued a certificate of occupancy therefor as provided herein. A municipality may require certificates of occupancy for Group R3, R4 and Group M occupancies.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1100 SECTION 405.

Section 405 of the UBC, Definition of Dwelling, is amended to read:

"Dwelling" is any building or any portion of a building which contains not more than two "dwelling units," including Class A-1 supervised living facilities as defined in section 420.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1200 SECTION 406.

Section 406 of the UBC is amended by the addition of the following definition:

"Earth sheltered structure" is a building constructed so that more than 50 percent of the exterior surface area of the building, excluding garages or other accessory buildings, is covered with earth. Partially completed buildings shall not be considered to be earth sheltered. (See Minnesota Statutes, section 116J.06, subdivision 2.)

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1300 SECTION 407.

Section 407 of the UBC, Definition of Fire Code, is amended as follows:

UBC Section 407. "Fire code" is the Minnesota Uniform Fire Code, authorized by Minnesota Statutes, section 299F.011.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1350 SECTION 414.

UBC Section 414, Definition of Mechanical Code, is amended as follows:

UBC Section 414. "Mechanical code" is the Minnesota Heating, Ventilating, Air Conditioning, and Refrigeration Code, chapter 1345.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1355 [Repealed, 11 SR 1405]

1305.1400 SECTION 420.

Section 420 of the UBC is amended by adding the following definitions:

"Supervised living facility" means a facility in which there is provided supervision, lodging, meals, and, in accordance with the provisions of rules of the

MINNESOTA RULES 1987

109 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.1600

Minnesota Department of Human Services, and the Minnesota Department of Health, counseling and developmental habilitative or rehabilitative services to five or more persons who are mentally retarded, chemically dependent, adult mentally ill, or physically handicapped.

“Class A supervised living facility” means a supervised living facility for ambulatory and mobile persons who are capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions.

Class A-1 supervised living facilities include homes providing boarding and lodging for six or fewer ambulatory or mobile disabled persons.

Class A-2 supervised living facilities include homes providing boarding and lodging for more than six ambulatory or mobile disabled persons.

“Class B supervised living facility” means a supervised living facility for ambulatory, nonambulatory, mobile or nonmobile persons who are not mentally or physically capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *L 1984 c 654 art 5 s 58; 11 SR 1405*

1305.1500 TABLE 5-A.

UBC Table 5-A, Groups I-1, I-2, R1, and R3 are amended to read as follows:
UBC Section 501 Table 5-A.

I.1 - Nurseries for full-time care of children under the age of six (each accommodating more than four persons). Hospitals, sanitariums, nursing homes, and similar buildings (each accommodating more than four persons).

I.2 - Detoxification centers, homes for children six years of age or over, supervised living facilities Class B as defined in UBC Section 420, for the mentally retarded, mentally ill, or the physically handicapped (each accommodating more than four persons).

R.1 - Hotels and apartment houses, convents and monasteries (each accommodating more than ten persons). Supervised living facilities Class A2 as defined in UBC Section 420 (accommodating more than six persons).

R.3 - Dwellings and lodging houses. Supervised living facilities Class A-1 as defined in UBC Section 420 (each accommodating six or fewer persons).

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1590 SECTION 509.

UBC Section 509(e) is amended to read as follows:

(e) Maximum Length. The distance between connected buildings measured within a pedestrian walkway must not exceed 300 feet.

Exceptions: 1. Pedestrian walkways that are fully sprinklered may be 400 feet in length.

2. Unenclosed walkways at grade.

UBC Section 509 is amended by adding (i) as follows:

(i) Smoke Venting. Enclosed pedestrian ways must be provided with means for venting smoke and hot gases to the outer air.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557; 11 SR 1405*

1305.1600 SECTION 510.

Section 510 of the UBC is amended by adding a new subsection (c) that reads as follows:

UBC Section 510(c) Sanitation Facilities. Sanitation facilities must be pro-

vided for each Occupancy in accordance with Table 5-E and UBC Sections 605, 705, 805, 905, 1005 or 1205 as amended herein. Fixtures must be provided for each sex in accordance with the percentage of occupants of each sex. When the percentage of each sex is not known, one-half for each sex shall be assumed. For sanitation facilities for the handicapped see parts 1340.0400 and 1340.0500.

Types of building occupancy not shown, or when the provisions of Table No. 5-E are excessive due to a specific use or occupant load, facilities may be considered individually by the administrative authority.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1700 SECTION 511.

Section 511(a) of the UBC is amended to read as follows:

UBC Section 511(a) Toilet Facilities. Each water closet stool must be located in a clear space not less than 30 inches in width and have a clear space in front of the water closet of not less than 24 inches.

For provisions for the physically handicapped, see chapter 1340.

Section 511(b) of the UBC is deleted in its entirety.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.1750 NEW SECTION 514.

UBC chapter 5 is amended by adding a new section to read as follows:

Section 514 Roof Access. Unless specifically exempted by the building official due to space limitation, roof height above grade or other special considerations, buildings on which any heating, air conditioning, or refrigeration equipment is hereafter installed on the roof, which equipment will require periodic inspection, service, and maintenance in accordance with the mechanical code, Minnesota Rules, chapter 1345, must meet the following requirements:

A stairway complying with chapter 33 or a stair leading to a scuttle or bulkhead in the roof having such equipment must be provided to make the equipment safely accessible. The stair leading to the scuttle or bulkhead must be placed at an angle of not more than 60 degrees measured from the horizontal with flat treads not less than six inches in width and a minimum length of 24 inches at the tread. No riser may be more than nine inches and handrails must be provided on both sides of the access stairs. The opening of the scuttle or bulkhead must not be less than nine square feet in area with the minimum dimension being two feet. This required access may not be located in or pass through the elevator shaft or elevator machine room.

The roof access opening and equipment must be located with at least six feet of clearance from the edge of the roof or similar hazards, unless a suitable rail or guard at least 42 inches high is provided.

Each unit of equipment must have an accessible disconnect switch. A 20-ampere 110-120 volt AC ground-type convenience outlet must be installed on or adjacent to the unit or equipment. The outlet must have ground-fault circuit-interrupter protection and may not be connected to the equipment circuit.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.1790 UBC CHAPTER 5, TABLE 5-B.

UBC Table 5-B is amended to require a one-hour occupancy separation between R-3 and B-3 Occupancies.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

MINNESOTA RULES 1987

111 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.1795

1305.1795 Table 5-E. REQUIRED SANITATION FIXTURES BASED ON OCCUPANT LOAD (1) (2); TABLE 5-E.

UBC chapter 5 is amended by adding the following Table No. 5-E.

REQUIRED SANITATION FIXTURES BASED ON OCCUPANT LOAD

OCCUPANCY	USE	S.F. per Oct.	WATER CLOSETS	URINALS	LAVATORIES	DRINKING FOUNTAINS	BATHTUBS OR SHOWERS	KITCHEN SINKS	SERVICE SINKS	
Group A Occupancies	Auditoriums	30	<u>Churches</u> 1 for each 300 men 1 for each 300 women	<u>Churches</u> (3)	<u>Churches</u> 1 for each 300	1 for each 300	—	—	1	
	Bowling Alleys	30								
Occupancies	Churches	60	<u>Other</u> <u>Occupants</u> <u>Fixtures</u> 1-100 1 101-200 2 201-400 3 401-750 3 Over 750 1 add'l for each 500	(3)	<u>Other</u> <u>Fixtures</u> 1-200 1 201-400 2 401-750 3 Over 750 1 add'l for each 500	1 for each 300	—	—	—	1
	Conference Rooms	80								
	Dance Floors	30								
	Dining, Drinking	30								
	Exhibit Rooms	30								
	Gymnasiums	80								
	Libraries	100								
	Lodge Rooms	80								
	Lounges	80								
	Rinks	30								
	Stadiums,	80								
	Grandstands	30								
Theaters	80									
Waiting Rooms	80									
Group E Occupancies (6)	Elementary	85	Boys Girls 1/ea. 100 1/ea. 30 1/ea. 100 1/ea. 25	1/ea. 30	1 for each 100 1 for each 100	1 for each 75	—	—	1 per floor	
	Secondary	130								
Group I Occupancies	Prisons, Jails	100	1/ea. cell		1 in each cell 1 ea. exercise room 1 for ea. 10 patients	1 for each 100	1 at each cell block floor	—	1 per floor	
	Hospitals, Nursing Homes	100	1/ea. 8 patients 1/ea. waiting room		1 for each 10	1 for each 100	1 for each 20 Other	—	1 per floor	
			<u>Other</u> 1/ea. 25 men 1/ea. 20 women							

MINNESOTA RULES 1987

Statutory Authority: *M.S. s 16B.59 to 16B.73*
History: *11 SR 1405*

Group	Occupancies	Area	Fact. Occ.	Wrhse. Fixt.	Fact. Occ.	Wrhse. Fixt.	Fact. Occ.	Wrhse. Fixt.	Factories Warehouses			
Group H	Aircraft Hangars	500										
Occupancies	Factories	200	1-10	1	(3)		for each					
Group B	Municipal Buildings	80	11-25	2			1-100	1-10(4)				
Occupancies	Office Buildings	200	26-50	3			Over 100	1-15(50)	1 for each 75			
	Sales	200	51-75	4								
	Service Stations	200	76-100	5								
	Storage Garages	500	Over 100	1 add'l for 30			Sales Occ.	Offices Fixt.	Sales, Offices			1 per floor
	Warehouses	500										
Group B-4			Sales, Office, etc. Occ.	Fixt.	Sales Office (3)		1-15	1				
Occupancies	Factories	200	16-35	2			16-35	2	1 for each 150			
	Sales	200	36-55	3			36-60	3				
	Warehouses	500	56-80	4			61-90	4				
			81-110	5			91-125	5				
			111-150	6			Over 125	1 to 45				
			Over 150	1 add'l for each 50								
Group R-1	Dwelling Units, Apt.	—		1	—		1			1		1 laundry tray
Occupancies	Motel, Hotel Units	—		1 for each 10			1 for each 10			1 for each 10		for each 10
	Rooming Houses	200		1 for each 10			1 for each 10		—	1 for each 10		dwelling units
	Dormitories	200		1 for each 10			1 for each 10			1 for each 10		or guest rooms
Group R-3 and R-4	1 and 2 Family	—		1	—		1			1		—
Occupancies												
Group M	—	—		—	—		—			—		—
Occupancies												
TEMPORARY FACILITIES				1 for ea. 30					1 for each 100			

Footnotes:

- (1) Occupant load is computed using the equation: $\frac{A^*}{S.F. \text{ per Occ.}} = \text{Occupant Load.}$
- (2) Square feet per occupant is only for computing the occupant load to determine the plumbing fixtures required.
- (3) Urinals may be furnished in place of water closets at the rate of one urinal for one water closet, but not to exceed one-third of the required water closets.
- (4) 1 fixture for each 10 occupants.
- (5) 1 fixture for each 15 occupants.
- (6) For waterclosets, and lavatories, these numbers are *minimum* & equal number for each sex is required.

*A—Area of building occupancy classification served.
S.F.—per Occ.—from Column 3 of this table.

MINNESOTA RULES 1987

113 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.1900

1305.1800 SECTION 605.

UBC Section 605 is amended to read as follows:

Section 605. All enclosed portions of Group A occupancies customarily used by human beings and all dressing rooms must be provided with natural light by means of exterior glazed openings with an area not less than one-tenth of the total floor area, and natural ventilation by means of openable exterior openings with an area of not less than one-twentieth of the total floor area or must be provided with artificial light and a mechanically operated ventilating system. The mechanically operated ventilating systems must be capable of supplying a minimum of five cubic feet per minute of outside air with a total circulated of not less than 15 cubic feet per minute per occupant in all portions of the building during the time the building is occupied. If the velocity of the air at the register exceeds ten feet per second, the register must be placed more than eight feet above the floor directly beneath.

Toilet rooms must be provided with a fully openable exterior window at least three square feet in area; or a vertical duct not less than 100 square inches in area for the toilet facility, with 50 additional inches for each additional facility; or a mechanically operated exhaust system capable of providing a complete change of air every 15 minutes. The systems must be connected directly to the outside, and the point of discharge must be at least five feet from any openable window.

For other requirements on water closets, see Section 511(a) as amended in part 1305.1700.

For additional sanitation facilities requirements, see section 510(c) as specified in part 1305.1600.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557; 11 SR 1405*

1305.1900 SECTION 705.

Section 705 of the UBC is amended to read as follows:

UBC Section 705. All portions of Group B occupancies must be provided with natural light by means of exterior glazed openings with an area equal to one-tenth of the total floor area, and natural ventilation by means of exterior openings with an area not less than 1/20 of total floor area, or must be provided with artificial light and mechanically operated ventilating system as specified in Section 605 and the applicable sections of the mechanical code.

In all buildings or portions of buildings where flammable liquids are used, exhaust ventilation must be provided sufficient to produce four air changes per hour. The exhaust ventilation must be taken from a point at or near the floor level.

In all enclosed parking garages used for storing or handling of automobiles operating under their own power and on all loading platforms in bus terminals, ventilation must be provided capable of exhausting a minimum of 3/4 cfm per square foot of gross floor area. The building official may approve an alternate ventilation system designed to exhaust a minimum of 14,000 cfm for each operating vehicle. The alternate system must be based upon the anticipated instantaneous movement rate of vehicles but not less than 2.5 percent (or one vehicle) of the garage capacity. Automatic CO sensing devices may be employed to modulate the ventilation system to maintain a maximum average concentration of CO of 50 ppm during any eight-hour period, with a maximum concentration not greater than 200 ppm for a period not exceeding one hour. Connecting offices, waiting rooms, ticket booths, etc., must be supplied with conditioned air under positive pressure.

Exception: In gasoline service stations without lubrication pits, storage garages and aircraft hangars not exceeding an area of 5,000 square feet, the building official may authorize the omission of ventilating equipment required

in this section where, in his opinion, the building is supplied with unobstructed openings to the outer air which are sufficient to provide the necessary ventilation.

Every building or portion of a building where persons are employed must be provided with at least one water closet. Separate facilities must be provided for each sex when the number of employees exceeds four and both sexes are employed. The toilet facilities must be located either in the building or conveniently in a building adjacent to it on the same property.

Water closet rooms in connection with food establishments where food is prepared, stored or served must have a nonabsorbent interior finish as specified in section 510(b), must have hand-washing facilities in or adjacent to them, and must be separated from food preparation or storage rooms as specified in Section 510(a).

A toilet room must be provided with a fully openable exterior window at least three square feet in area, or a vertical duct not less than 100 square inches in area for the toilet facility, with 50 additional inches for each additional facility, or a mechanically operated exhaust system, capable of providing a complete change of air every 15 minutes. Exhaust systems must be connected directly to the outside and the point of discharge must be at least five feet from any openable window.

For other requirements on water closets, see UBC Section 511(a) as amended in this chapter.

For additional sanitation facilities requirements, see UBC Section 510(c) as specified in this rule.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.2000 SECTION 709.

UBC Section 709 is amended by adding a new paragraph (m) to read as follows:

Section 709(m) Every parking ramp or other parking facility must include spaces for the parking of motor vehicles having a capacity of seven to 16 persons. The number of required spaces must be determined by two percent of the gross designed parking area with a minimum of two spaces.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 9 SR 1557

1305.2100 SECTION 802.

UBC Section 802(c) is amended to read as follows:

Section 802(c) Special Provisions. Rooms in Divisions 1 and 2 occupancies used for day-care purposes, kindergarten, first grade, or second grade pupils, and Division 3 occupancies may neither be located above the first story, nor be located in a basement unless at least one exit is provided directly to the outside.

Storage and janitor closets must be of one-hour fire-resistive construction. Stages and enclosed platforms must be constructed in accordance with chapter 39. For attic space partitions and draft stops, see section 2516(f).

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 9 SR 1557

1305.2200 SECTION 805.

Section 805 of the UBC is amended to read as follows:

UBC Section 805. All portions of Group E occupancies must be provided with light and ventilation, either natural or artificial, as specified in Section 605.

For other requirements on water closets, see part 1305.4100, section 511(a) as amended in this rule.

For additional sanitation facilities requirements, see UBC section 510(c) as specified in this rule.

Statutory Authority: *MS s 16B.59 to 16B.73*

MINNESOTA RULES 1987

115 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.2400

1305.2300 SECTION 809.

UBC Section 809 is amended to read as follows:

Section 809. Approved fire alarms must be provided for all Group E occupancies with an occupant load of more than 50 persons, and in Group E Division 3 occupancies with an occupant load of more than 29 persons. In every Group E occupancy with an automatic sprinkler or detection system, the operation of the system must automatically activate the school fire alarm system.

The fire alarm system must be installed in compliance with NFPA Standard 72-A-79, "Local Protective Signaling Systems."

An approved fire alarm is a fire alarm and detection system consisting of the following:

1. A complete, noncoded, continuously sounding until manually reset, electronically supervised type.
2. Sounding stations on 100-foot to 150-foot spacing (a) in corridors, (b) in areas of high noise levels, such as band rooms, shops, and boiler rooms, and (c) on a weatherproof station on the exterior of the building facing residential areas.
3. Automatic sending stations (detectors) in boiler rooms, kitchens, shops, painting areas, lounges, laundries, janitor's closets, storerooms, unsupervised and unoccupied spaces, and critical or hazardous areas.
4. Unobstructed, readily accessible manual sending stations at visible locations in the natural path of escape from fire, near each exit from an area on each floor.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.2400 SECTION 905.

UBC Section 905 is amended to read as follows:

UBC Section 905. In Group H Occupancy buildings, all enclosed portions customarily occupied by human beings, other than rooms and areas for which requirements are specified elsewhere in this section must be provided with natural light by means of exterior glazed openings with an area equal to one-tenth of the total floor area of those portions, and natural ventilation by means of exterior openings with an openable area not less than 1/20 of the total floor area of those portions, or must be provided with artificial light and a mechanically operated ventilating system.

The mechanically operated ventilation system must be capable of supplying a minimum of five cubic feet per minute of outside air with a total circulated of not less than 15 cubic feet per minute per occupant in all occupied portions of the building.

In all buildings or portions of buildings where Class I, II, and III-A liquids are used, mechanical exhaust ventilation must be provided sufficient to produce four complete air changes per hour. The exhaust ventilation must be taken from a point at or near the floor level.

In all buildings used for the repair or handling of automobiles operating under their own power, mechanical ventilation must be provided capable of exhausting a minimum of 3/4 cfm per square foot. Additionally, each engine repair stall must be equipped with an exhaust pipe extension duct, extending to the outside of the building, which, if over ten feet in length, must mechanically exhaust 300 cubic feet per minute. Connecting offices and waiting rooms must be supplied with conditioned air under positive pressure.

Exception: In public repair garages and aircraft hangars not exceeding an area of 5,000 square feet, the building official may authorize the omission of ventilating equipment required by this section where, in his opinion, the building is supplied with unobstructed openings to the outer air which are sufficient to provide the necessary ventilation.

Every building or portion of a building where persons are employed must be provided with at least one water closet. Separate facilities must be provided for each sex when the number of employees exceeds four and both sexes are employed.

The toilet facilities must be located either in the building or conveniently in a building adjacent to it on the same property.

A toilet room must be provided with a fully openable exterior window at least three square feet in area, or a vertical duct not less than 100 square inches in area for the toilet facility, with 50 additional inches for each additional facility, or a mechanically operated exhaust system, capable of providing a complete change of air every 15 minutes. The exhaust systems must be connected directly to the outside, and the point of discharge must be at least five feet from any openable window.

For other requirements on water closets, see UBC Section 511(a) as amended in this chapter.

For additional sanitation facilities requirements, see UBC Section 510(c), as specified in this chapter.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.2500 SECTION 1001.

Section 1001 of the UBC is amended to read as follows:

UBC Section 1001. Group I occupancies shall be:

Division 1. Nurseries for the full-time care of children under the age of six (each accommodating more than four persons). Hospitals, sanitariums, nursing homes, and similar buildings (each accommodating more than four persons).

Division 2. Detoxification centers, homes for children six years of age or over, supervised living facilities Class B as defined for the mentally retarded, mentally ill, or the physically handicapped (each accommodating more than four persons).

Division 3. Mental hospitals, mental sanitariums, jails, prisons, reformatories, and buildings where personal liberties of inmates are similarly restrained.

For occupancy separations, see Table No. 5-B.

For occupant load, see Section 3301.

Exception: Group I occupancies shall not include buildings used only for private residential purposes for a family group.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.2600 SECTION 1002.

UBC Section 1002(b) is amended to read as follows:

Section 1002(b) Special Provisions. Division 3 occupancies must be housed in buildings of Type I or Type II-F.R. construction.

Every story of a Group I occupancy accommodating more than five persons, unless provided with a horizontal exit, must be divided into not less than two compartments accommodating approximately the same number of persons in each compartment by a smoke-stop partition meeting the requirements of one-hour occupancy separation so as to provide an area of refuge within the building. Corridor openings in the smoke-stop partition must be protected with doors as required in section 3305(h). Other openings are limited to ducts which have fire dampers in the plane of the wall activated by detectors of products of combustion other than heat conforming to section 4306(b) 2. A ventilation system capable of smoke evacuation must be provided for each area of refuge. When approved by the building official, openings to the exterior of the building may be used in lieu of a mechanical system.

Rooms occupied by inmates or patients whose personal liberties are restrained must have noncombustible floor surfaces.

MINNESOTA RULES 1987

117 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.3000

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.2700 SECTION 1005.

Section 1005 of the UBC is amended to read as follows:

UBC Section 1005. All portions of Group I occupancies must be provided with natural light by means of exterior glazed openings with an area equal to one-tenth of the total floor area, and natural ventilation by means of exterior openings with an area not less than 1/20 the total floor area, or must be provided with artificial light and a mechanically operated ventilating system as specified in section 605 and the mechanical code.

For other requirements on water closets, see UBC Section 511(a) as amended in this chapter.

For additional sanitation facilities requirements, see UBC Section 510(c) as specified in this chapter.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.2800 SECTION 1009.

UBC Section 1009 is amended to read as follows:

Section 1009. An approved fire alarm system must be provided for all Group I occupancies. Audible alarm devices must be used in all nonpatient areas. Visible alarm devices may be used in lieu of audible devices in patient-occupied areas. An approved alarm system must comply with section 809 as amended in part 1305.2300. Operation of any fire alarm activating device must automatically, without delay, accomplish general alarm indication and control functions. Zoned, coded systems are permitted.

Exception: Alarm systems may be installed in accordance with NFPA 101, 1981 edition, as for new construction.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.2900 SECTION 1101.

UBC Section 1101 Group M, sixth line is amended to read as follows:

For occupancy separations, see Table No. 5-B. For purposes of occupancy separation, manufactured homes, as defined in Minnesota Statutes, section 327.31, subdivision 3, are Group R, Division 3 occupancies.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.3000 SECTION 1201.

UBC Section 1201 is amended by adding a new Division to read as follows:

Section 1201 Group R, Division 4 occupancies: This use group includes all one- and two-family dwellings built exclusively by the standards as established in the 1975 One and Two Family Dwelling Code as promulgated by the national model code organizations and Minnesota Rules, chapter 4215. Use and installation of foam plastics must comply with UBC Section 1712 as amended in part 1305.4200.

Exception: The plumbing requirements found in Part V (Chapters 20 to 25) and the referenced portions of Part VII (2-26.2001-S-26.2103) are deleted in their entirety. The requirements of the Minnesota Plumbing Code, parts 4715.0200 to 4715.2860, for plumbing shall apply to this occupancy group.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.3100 AMENDMENTS TO THE UNIFORM BUILDING CODE 118**1305.3100 ONE AND TWO FAMILY DWELLING CODE, SECTION R-202.**

Section R-202 of the One and Two Family Dwelling Code is amended to read as follows:

Section R-202. Buildings must be constructed in accordance with the provisions of this code using the design criteria set forth in Table No. 2-A. These criteria shall be established by the jurisdiction based solely or in part on the climatic and geographic conditions set forth in Appendix A.

Roof snow loads must be in accordance with part 1305.4700. Frost line depth must be in accordance with part 1305.5400. Wind velocity must be in accordance with the conditions set forth in Appendix A of the One and Two Family Dwelling Code.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.3200 ONE AND TWO FAMILY DWELLING CODE, SECTION R-204.

Section R-204 of the One and Two Family Dwelling Code is amended to read as follows:

Section R-204. All habitable rooms must be provided with aggregate exterior glazing area of not less than eight percent of the floor area of the rooms with a minimum of eight square feet. One-half of the required area of glazing must be operable.

Exception: The glazed areas need not be operable where an approved mechanical ventilation system is provided capable of producing a change of air every 30 minutes and the opening is not required by section R-211.

Bathrooms, water-closet compartments, and other similar rooms must be provided with aggregate glazing area in windows of not less than three square feet, one-half of which must be operable.

Exception: The glazed areas are not required where artificial light and an approved mechanical ventilation system is provided capable of producing a change of air every 12 minutes.

Required glazed openings must open directly onto a street or public alley, or a yard or court located on the same lot as the building.

Exception: Required glazed openings may face into a roofed porch where the porch abuts a street, yard or court and the longer side of the porch is at least 65 percent open and unobstructed and the ceiling height is not less than seven feet.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.3300 ONE AND TWO FAMILY DWELLING CODE, SECTION R-211.

Section R-211 of the One and Two Family Dwelling Code is amended to read as follows:

Section R-211 Exits. At least one exit conforming to this chapter must be provided from each dwelling unit.

Every sleeping room must have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside to a full clear opening without the use of separate tools. Where windows are provided as a means of egress or rescue they must have a sill height of not more than 48 inches above the floor.

All egress or rescue windows from sleeping rooms must have a minimum net clear opening of 5.7 square feet. The minimum net clear opening height dimension must be 24 inches. The minimum net clear opening width dimension must be 20 inches.

Statutory Authority: *MS s 16B.59 to 16B.73*

MINNESOTA RULES 1987

119 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.3600

1305.3400 SECTION 1201.

UBC Section 1201 Group R Division 1 occupancy definition is amended to read as follows:

Division 1. Hotels and apartment houses. Convents and monasteries (each accommodating more than ten persons), supervised living facilities Class A-2 as defined in Section 420 for the mentally retarded, mentally ill, chemically dependent, and the physically handicapped (each accommodating more than six persons). Physically handicapped persons shall be housed at street level in supervised living facilities.

UBC Section 1201 Group R, Division 3 is amended to read as follows:

UBC Section 1201, Division 3. Dwellings and lodging houses, supervised living facilities Class A-1 as defined in Section 420. For occupancy separations, see Table No. 5-B.

Statutory Authority: *MS s 16B.59 to 16B.73.*

1305.3500 [Repealed, 11 SR 1405]

1305.3600 SECTION 1205.

UBC Section 1205 is amended to read as follows:

Section 1205. (a) Light and Ventilation. All guest rooms, dormitories, and habitable rooms within a dwelling unit shall be provided with natural light by means of exterior glazed openings with an area not less than eight percent of the floor area of such rooms with a minimum of eight square feet. All bathrooms, water closet compartments, laundry rooms, and similar rooms shall be provided with natural ventilation by means of openable exterior openings with an area not less than 1/20 of the floor area of such rooms with a minimum of 1-1/2 square feet.

All guest rooms, dormitories, and habitable rooms within a dwelling unit shall be provided with natural ventilation by means of openable exterior openings with an area of not less than four percent of the floor area of such rooms with a minimum of four square feet.

In lieu of required exterior openings for natural ventilation, a mechanical ventilating system may be provided. Such system shall be capable of providing two air changes per hour in all guest rooms, dormitories, habitable rooms, and in public corridors. One-fifth of the air supply shall be taken from the outside. In bathrooms, water closet compartments, laundry rooms, and similar rooms a mechanical ventilations system connected directly to the outside, capable of providing five air changes per hour, shall be provided.

For the purpose of determining light and ventilation requirements, any room may be considered as a portion of an adjoining room when one-half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room or 25 square feet, whichever is greater.

Required exterior openings for natural light and ventilation shall open directly onto a street or public alley or a yard or court located on the same lot as the building.

Exception: Required windows may open into a roofed porch where the porch:

1. abuts a street, yard, or court; and
2. has a ceiling height of not less than seven feet; and
3. has the longer side at least 65 percent open and unobstructed.

(b) Sanitation. Every building must be provided with at least one water closet. Every hotel or subdivision of a hotel where both sexes are accommodated must contain at least two separate toilet facilities which are conspicuously identified for male or female use, each of which contains at least one water closet.

Every dwelling unit must be provided with a kitchen equipped with a kitchen sink. Every dwelling unit and every lodging house must be provided with a bathroom equipped with facilities consisting of a water closet, lavatory, and either a bathtub or shower. Each sink, lavatory, and either a bathtub or shower must be equipped with hot and cold running water necessary for its normal operation.

For other requirements on water closets, see section 511(a) as amended in part 1305.1700.

For additional sanitation facilities requirements, see section 510(c), as specified in part 1305.1600.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.3700 SECTION 1210.

UBC Section 1210(a) is amended to read as follows:

Section 1210. (a) Fire-warning Systems. Every dwelling unit and every guest room in a hotel or lodging house used for sleeping purposes must be provided with smoke detectors conforming to UBC Standard No. 43-6. In dwelling units, detectors must be mounted on the ceiling or wall at a point centrally located in the corridor or area giving access to rooms used for sleeping purposes. In an efficiency dwelling unit, hotel sleeping room and in hotel suites, the detector must be centrally located on the ceiling of the main room or hotel sleeping room. Where sleeping rooms are on an upper level, the detector must be placed at the center of the ceiling directly above the stairway. All detectors must be located in accordance with approved manufacturer's instructions. When actuated, the detector must provide an alarm in the dwelling unit or guest room.

When alterations, repairs, or additions to habitable space requiring a permit and having a valuation in excess of \$1,000 occur, or when one or more sleeping rooms are added or created in existing Group R, Division 3 or 4 Occupancies, the entire building must be provided with smoke detectors located as required for new Group R, Division 3 or 4 Occupancies.

In new construction, required smoke detectors must receive their primary power from the building wiring when that wiring is served from a commercial source. Wiring must be permanent and without a disconnecting switch other than those required for overcurrent protection.

Smoke detectors may be battery operated when installed in existing buildings, in buildings without commercial power, or in buildings which undergo alterations, repairs or additions regulated by the second paragraph of this section.

A smoke detector must be installed in the basement of a dwelling unit having a stairway which opens from the basement into the dwelling. In new construction, the detector must be connected to a sounding device or other detector to provide an alarm which will be audible in the sleeping area.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.3800 SECTION 1213.

Section 1213 of the UBC is deleted in its entirety.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.3850 [Repealed, 11 SR 1405]

1305.3900 NEW SECTION 1214.

UBC chapter 12 is amended by adding a new section to read as follows:

Section 1214. Deadbolt Locks Required. All doors leading to public or shared areas from all apartment dwelling units and hotel units must be provided

MINNESOTA RULES 1987

121 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.4200

with deadbolt locks, at least one of which must be capable of being locked with a key from the exterior of each unit. For the purpose of this section a "deadbolt lock" is a locking bolt, which, when in the locked position, can only be moved positively by turning a knob, key, or sliding bolt, and which must be independent of other latching devices.

A deadbolt lock having a bolt moved by turning a key must be of the five-pin tumbler type or an approved equivalent. The lock throw may not be less than three-quarters of an inch. Locks must meet the requirements of section 3304(c).

Exception: Hotel unit doors may be provided with locks having separate deadbolts and deadlocking latchbolts which are interconnected for antipanic operation, and must be provided with emergency and display keying to outlaw all keys except emergency and display keys when the deadbolt is projected by the turn piece from the room side.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 9 SR 1557; 11 SR 1405

1305.3970 [Repealed, 11 SR 1405]

1305.4000 [Repealed by amendment, 9 SR 1557]

1305.4100 SECTION 1711.

Section 1711 of the UBC is amended to read as follows:

UBC Section 1711. All unenclosed floor and roof openings, open and glazed sides of landings and ramps, balconies or porches which are more than 30 inches above grade or floor below, and roofs used for other than service of the building must be protected by a guardrail. Guardrails may not be less than 42 inches in height. Open guardrail and stair railings must have intermediate rails or an ornamental pattern so that a sphere six inches in diameter cannot pass through. The height of stair railings on open sides may be as specified in Section 3306 (j) in lieu of providing a guardrail. Ramps must, in addition, have handrails when required by Section 3307.

On all earth-sheltered structures a means must be provided to restrict access to the roof area unless guardrails are provided and the roof is designed for vehicular loads.

Exceptions:

1. Guardrails need not be provided on the loading side of loading docks.
2. Guardrails for Group R, Division 3 and Group M, Division 1 occupancies may be 36 inches in height.
3. Interior guardrails within individual dwelling units or guest rooms of Group R, Division 1 occupancies may be 36 inches in height.
4. The open space between the intermediate rails or ornamental pattern of guardrails in areas of commercial and industrial type occupancies which are not accessible to the public may be increased such that a 12-inch-diameter sphere cannot pass through.
5. Guardrails on a balcony immediately in front of the first row of fixed seats and which are not at the end of an aisle may be 26 inches in height.
6. Guardrails need not be provided on the auditorium side of a stage or enclosed platform.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.4200 SECTION 1712.

Section 1712(a) General. The provisions of this section govern the requirements and uses of foam plastic in buildings and structures. For trim, see Section 1705(e).

Except where otherwise noted in this section, all foam plastics used in

building construction must have a flame-spread rating of not more than 75 and must have a smoke-developed rating of not more than 450 when tested in the maximum thickness intended for use in accordance with UBC Standard No. 42-1. All packages and containers of foam plastic and foam plastic ingredients must bear the label of an approved agency showing either the flame-spread rating and smoke-developed rating of the product at the thickness tested or the use for which the product has been listed. The interior of the building must be separated from the foam plastic by an approved thermal barrier having an index of 15 when tested over calcium silicate board in accordance with UBC Standard No. 17-3 or protected from the interior of the building by a thermal barrier of one-half inch gypsum wallboard. The thermal barrier must be installed in such a manner that it will remain in place for the time of its index classification based upon approved diversified tests.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.4300 [Repealed, 11 SR 1405]

1305.4500 SECTION 1807.

UBC Section 1807(h) is amended to read as follows:

Section 1807(h) Elevators. Elevators and elevator lobbies must comply with the provisions of Minnesota Rules, parts 1320.0100 to 1320.2000, and the following:

Note: A bank of elevators is a group of elevators or a single elevator controlled by a common operating system; that is, all those elevators which respond to a single call button constitute a bank of elevators. There is no limit on the number of cars which may be in a bank or group but there may not be more than four cars within a common hoistway.

1. Elevators on all floors must open into elevator lobbies which are separated from the remainder of the building, including corridors and other exits, by walls extending from the floor to the underside of the fire-resistive floor or roof above. The walls must be of not less than one-hour fire-resistive construction. Openings through the walls must conform to section 3305(h).

Exceptions: (1) This requirement does not apply to the main entrance level elevator lobby in an office building, or an elevator lobby located in an atrium which complies with section 1715.

(2) When a complete and approved automatic fire extinguishing system is installed in a Group B, Division 2 occupancy, the separation of elevator or elevator lobbies is not required on any floor which is provided with an exit corridor conforming to the provisions of section 3305(g).

2. Each elevator lobby shall be provided with an approved smoke detector located on the lobby ceiling. When the detector is activated, elevator doors shall not open and all cars serving that lobby are to return to the main floor and be under manual control only. If the main floor detector or a transfer floor detector is activated, all cars serving the main floor or transfer floor shall return to a location approved by the fire department and building official and be under manual control only. The smoke detector is to operate before the optical density reaches 0.03 per foot. The detector may serve to close the lobby doors.

3. Elevator hoistways shall not be vented through an elevator machine room. Cable slots entering the machine room shall be sleeved beneath the machine room floor and extend to not less than 12 inches below the shaft vent to inhibit the passage of smoke into the machine room.

4. For car size requirements, see ANSI 17.1-Rule 211.3, as amended in Minnesota Rules, part 1320.0600, subpart 6.

UBC Section 1807(m) is amended to read as follows:

(m) Automatic Sprinkler System Alternatives. When a complete approved

MINNESOTA RULES 1987

123 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.4700

automatic sprinkler system complying with this section is installed in a building, the following modifications of code requirements are permitted:

1. The fire-resistive time periods in Table No. 17-A may be reduced by one hour for interior bearing walls, exterior bearing and nonbearing walls, roofs, and the beams supporting roofs, provided they do not frame into columns. Vertical shafts other than stairway enclosures and elevator shafts may be reduced to one hour when sprinklers are installed within the shafts at alternate floors. The fire-resistive time period reduction specified in this paragraph does not apply to exterior bearing and nonbearing walls whose fire-resistive rating has already been reduced under the exceptions contained within Section 1803(a) or 1903(a).

2. Except for corridors in Group B, Division 2 and Group R, Division 1 Occupancies and partitions separating dwelling units or guest rooms, all interior nonbearing partitions required to be one-hour fire-resistive construction by Table No. 17-A may be of noncombustible construction without a fire-resistive time period.

3. Fixed tempered glass may be used in lieu of openable panels for smoke control purposes.

4. Travel distance from the most remote point in the floor area to a horizontal exit or to an enclosed stairway may be 300 feet.

5. The manually operated fire alarm system required in the compartmented building is not required.

6. Spandrel walls, eyebrows, and compartmentation are not required. The fire resistance of the floors and juncture of exterior walls with each floor, however, must be maintained.

7. Fire dampers, other than those needed to protect corridors and floor-ceiling assemblies to maintain the fire resistance of the assembly, are not required except for those which may be necessary to bypass smoke to the outside, those provided to convert from recirculated air to 100 percent outside air, and those which may be required to protect the fresh air supply intake against smoke which may be outside the building.

8. Emergency windows required by Section 1204 are not required.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557; 11 SR 1405*

1305.4600 SECTION 2303.

Section 2303(a) of the UBC is amended to read as follows:

UBC Section 2303. (a) General. All buildings and portions thereof shall be designed and constructed to sustain, within the stress limitations specified in this code, all dead loads and all other loads specified in this chapter or elsewhere in this code. Impact loads shall be considered in the design of any structure where impact loads occur.

Exception: Unless otherwise required by the building official, buildings or portions thereof, other than earth-sheltered structures, which are constructed in accordance with the conventional framing requirements specified in Chapter 25 of this code shall be deemed to meet the requirements of this section.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.4700 SECTION 2305.

Section 2305(d) of the UBC is amended to read as follows:

UBC Section 2305(d) Snow Loads. Snow loads full or unbalanced shall be considered in place of loads set forth in Table No. 23-C, where such loading will result in larger members or connections.

A basic snow load of 40 pounds per square foot of horizontal projection is required in the following counties: Anoka, Carlton, Carver, Chisago, Cook,

Dakota, Hennepin, Isanti, Lake, Pine, Ramsey, Saint Louis, Scott, and Washington. A basic snow load of 30 pounds per square foot of horizontal projection is required for all other counties.

Potential accumulation of snow at valleys, parapets, roof structures, and offsets in roofs of uneven configuration shall be considered. Where snow loads occur, the snow loads shall be determined by the building official in accordance with chapter 1365.

Exceptions:

1. The requirements of chapter 1365 shall not apply to Group R Division 3, Group R Division 4, and Group M occupancies.

2. A basic snow load of 30 pounds per square foot of horizontal projection shall be acceptable for detached Group M, Division 1 occupancies in all counties.

Snow loads in excess of 20 pounds per square foot may be reduced for each degree of pitch over 20 degrees. See chapter 1365.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.4800 SECTION 2311.

Section 2311(a) of the UBC is amended to read:

UBC Section 2311(a) General. Every building or structure and every portion of a building or structure must be designed and built to resist the wind effects determined in accordance with the requirements of this section. Wind is presumed to come from any horizontal direction. No reduction in wind pressure may be taken for the shielding effect of adjacent structures.

Structures sensitive to dynamic effects, such as buildings with a height-width ratio greater than five, structures sensitive to wind-excited oscillations, such as vortex shedding or icing, and buildings over 400 feet in height, must be, and any structure may be, designed in accordance with approved national standards.

The effect of one-half inch of radial ice must be included in the design of open frame towers including all supporting guys. This effect must include the weight of the ice and the increased profile of each such tower component so coated.

UBC Section 2311(b) is amended to read as follows:

Section 2311(b) Basic Wind Speed. The minimum basic wind speed for determining design wind pressure is 80 miles per hour (mph). See Table 23-F for conversion from mph to pressures in pounds per square foot (psf).

UBC Section 2311(h) is deleted in its entirety.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 9 SR 1557

1305.4850 SECTION 2311.

UBC Section 2311(h) is deleted in its entirety.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 11 SR 1405

1305.4900 SECTION 2312.

Section 2312(a) of the UBC is amended to read as follows:

UBC Section 2312(a) General. For the purpose of the code this state shall be considered to be in Zone "0," no damage area. Every building or structure and every portion thereof shall be designed and constructed to resist stresses produced by lateral forces as provided in this section. Stresses shall be calculated as the effect of a force applied horizontally at each floor or roof level above the base. The force shall be assumed to come from any horizontal direction.

Structural concepts other than set forth in this section may be approved by

MINNESOTA RULES 1987

125 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.5310

the building official when evidence is submitted showing the equivalent ductility and energy absorption are provided.

Where prescribed wind loads produce higher stresses, such loads shall be used in lieu of the loads resulting from earthquake forces.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.5000 [Repealed, 11 SR 1405]

1305.5100 [Repealed, 11 SR 1405]

1305.5200 SECTION 2501.

Section 2501(a) of the UBC is amended to read as follows:

UBC Section 2501(a) Quality and Design. The quality and design of wood members and their fastenings shall conform to the provisions of this chapter; and to the applicable standards listed in chapter 60 as amended herein.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.5300 SECTION 2510.

Section 2510(h) of the UBC is amended to read as follows:

UBC Section 2510(h) Metal Plate Connectors. Metal plate connectors employed as joint connectors in light wood trusses, and the design and testing of such trusses, shall conform to the Design Specification for Metal Plate Connected Wood Trusses, 1985 edition published by the Truss Plate Institute Inc., TPI-85 and the following amendments, thereto.

Part I Item 1.2.1(c)5 of TPI-85 shall be amended to read as follows: Concentrated loads, and their points and method of application.

Part III Item 3.4.16 shall be added to TPI-85 and reads as follows: Part III, Item 3.4.16, Cross Grain Stress. Where design loads or their method of application induce cross-grain tension or bending stress, such cross-grain stress shall be considered in the design.

Snow loads shall be determined in accordance with the requirements of part 1305.4700, UBC Section 2305(d). Wind loads shall be determined in accordance with the requirements of UBC Section 2311.

Other loads shall be determined in accordance with the design requirements of UBC Chapter 23.

Each truss manufacturer shall retain an approved agency having no financial interest in the plant being inspected to make nonscheduled inspections of truss fabrication and delivery and operations.

The inspection shall cover all phases of truss operation, including lumber storage, handling, cutting, fixtures, presses or rollers, fabrication, bundling and banding, handling, and delivery.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.5310 SECTION 2516.

UBC Section 2516(c) 11 is amended to read as follows:

Section 2516(c) 11. Weather exposure. Approved wood of natural resistance to decay or treated wood must be used for those portions of wood members which form the structural supports of buildings, balconies, porches, or similar permanent building appurtenances when those members are exposed to the weather without adequate protection from a roof, eave, overhang, or other covering to prevent moisture or water accumulation on the surface or at joints between members. Those members must include horizontal members such as girders, joists, and decking, vertical members such as posts, poles, and columns, or both horizontal and vertical members.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 9 SR 1557

1305.5320 SECTION 2517.

UBC Section 2517(h) 6 is amended to read as follows:

Section 2517(h) 6. Blocking. Roof rafters and ceiling joists must be supported laterally to prevent rotation and lateral displacement when required by section 2506(h).

Statutory Authority: *MS s 16B.59 to 16B.73*

History: 9 SR 1557; 11 SR 1405

1305.5400 SECTION 2907.

Section 2907(a) of the UBC is amended to read as follows:

UBC Section 2907(a) General. Footings and foundation, unless otherwise specifically provided, must be constructed of masonry, concrete or treated wood in conformance with UBC Standard No. 29-3 and in all cases must extend below the frost line. Footings of concrete and masonry must be of solid material. Foundations supporting wood must extend at least six inches above the adjacent finish grade. Footings must have a minimum depth below finished grade for the zone as established below unless another depth is recommended by a foundation investigation.

1. In the absence of a determination by an engineer competent in soil mechanics, the minimum allowable footing depth in feet due to freezing is five feet in Zone I and 3-1/2 feet in Zone II.

Zone I includes the counties of: Aitkin, Becker, Beltrami, Carlton, Cass, Clay, Clearwater, Cook, Crow Wing, Douglas, Grant, Hubbard, Itasca, Kanabec, Kittson, Koochiching, Lake, Lake of the Woods, Mahnomon, Marshall, Mille Lacs, Morrison, Norman, Otter Tail, Pennington, Pine, Polk, Red Lake, Roseau, Saint Louis, Todd, Traverse, Wadena, and Wilkin.

Zone II shall include the counties of: Anoka, Benton, Big Stone, Blue Earth, Brown, Carver, Chippewa, Chisago, Cottonwood, Dakota, Dodge, Faribault, Fillmore, Freeborn, Goodhue, Hennepin, Houston, Isanti, Jackson, Kandiyohi, Lac Qui Parle, Le Sueur, Lincoln, Lyon, McLeod, Martin, Meeker, Mower, Murray, Nicollet, Nobles, Olmsted, Pipestone, Pope, Ramsey, Redwood, Renville, Rice, Rock, Scott, Sibley, Sherburne, Stearns, Steele, Stevens, Swift, Wabasha, Waseca, Washington, Watonwan, Winona, Wright, and Yellow Medicine. Less depths may be permitted when supporting evidence is presented by an engineer competent in soil mechanics.

2. Soil Under Slab on Grade Construction for Buildings. When soil, natural or fill, is sand or pit run sand and gravel, and of depth in accordance with minimum footings depth requirements for each zone, slab on grade construction which supports roof and wall loads shall be permitted. Slab on grade construction for detached buildings Group M, Division 1 occupancies may be placed on any soil except peat or muck.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.5500 SECTION 3203.

UBC Section 3203(d) 3 is amended to read as follows:

UBC Section 3203(d) 3. Shingle; shake and tile roofs. A General. Installation shall be in accordance with Table No. 32-B. Underlayment, when required, shall be lapped horizontally and vertically so as to shed water.

In areas subject to roof ice buildup, underlayment consisting of two layers of Type 15 felt applied shingle fashion shall be installed and solid mopped together with approved cementing material between the plies extending from the eave up the roof to a point 24 inches inside the exterior wall line of the building.

MINNESOTA RULES 1987

127 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.5900

The entire state of Minnesota shall be deemed an area subject to roof ice buildup.

Exceptions:

1. For wood shingle or wood shake roofs the underlayment shall extend 36 inches inside the exterior wall line of the building.

2. When interlocking tiles are used, the underlayment may consist of one layer of Type 40 or heavier asphalt-coated base sheet extending from the eave to a point 24 inches inside the exterior wall line of the building. When this method is used, all horizontal and vertical seams of the base sheet shall be lapped six inches and be continuously sealed with approved cementing material and shall be applied only over solid sheathing.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.5700 SECTION 3207.

Section 3207(c) of the UBC is amended to read as follows:

UBC Section 3207(c). Where roof drains are required, overflow drains having the same size as roof drains shall be installed with the inlet flow line located two inches above the low point of the roof, or overflow scuppers having three times the size of the roof drains may be installed in adjacent parapet walls with the inlet flow line located two inches above the low point of the adjacent roof and having a minimum opening height of four inches. Overflow drains shall be connected to drain lines independent from the roof drains, and shall discharge above grade.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.5750 SECTION 3301.

UBC Section 3301(e) is deleted in its entirety.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.5800 SECTION 3304.

UBC Section 3304(a) is amended to read as follows:

Section 3304. (a) General. This section applies to every exit door serving an area having an occupant load of ten or more or serving hazardous rooms or areas, except that subsections (c), (h), and (i) apply to all exit doors regardless of occupant load. Buildings or structures used for human occupancy and each dwelling unit or guest room leased for gain must have at least one exit door that meets the requirements of subsection (e).

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.5900 SECTION 3305.

UBC Section 3305(h) 1 is amended by adding an exception 3 to read as follows:

Exception:

3. In Type I and II-F.R. buildings housing Group B-2 occupancies, corridor walls may be of approved wired glass set in metal frames. The glass height must not exceed two-thirds of the width of the corridor. A draft curtain of at least one-hour fire-resistive construction and not less than 24 inches in height must be provided to protect the corridor from the Group B-2 occupancy area (tenant space). The draft curtain must be located above the glass and extend a minimum of 24 inches below any finished ceilings in the tenant space. If the finished ceiling is not a fire-rated assembly, the draft curtain must extend from the wire glass to

MINNESOTA RULES 1987

1305.5900 AMENDMENTS TO THE UNIFORM BUILDING CODE 128

a rated ceiling or floor assembly. When the B-2 occupancy area (tenant space) is protected by an approved automatic fire extinguishing system for a distance of 12 feet in depth adjoining the corridor, and the corridor is not less than 12 feet in width, glass other than wired glass may be approved. Open grille-type gates and similar enclosing or security devices may be used in corridor walls of corridors not less than 12 feet in width, when the entire story is protected by an approved fire extinguishing system.

In buildings of other than Type I or of Type II-F.R. construction, this exception is not permitted, unless the entire building is provided with an approved automatic fire extinguishing system.

UBC Section 3305(h) 1 is amended by adding an exception 4 to read as follows:

4. In hospital and nursing home occupancies (I-1) doors entering sleeping rooms from a corridor need not be constructed or maintained as self-closing or automatic-closing when the building is equipped with an approved complete fire extinguishing sprinkler system in compliance with chapter 38.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.5910 [Repealed, 11 SR 1405]

1305.6000 SECTION 3321.

UBC Section 3321(b) is amended to read as follows:

UBC Section 3321(b). Minimum size of exits. Every exit opening through which patients are transported on stretchers or beds must be of sufficient width to permit the ready passage of stretchers or beds but must have a clear width of not less than 44 inches, except as hereinafter provided. Exit openings in Division 2 Occupancies must have a clear width of not less than 34 inches. There must be no projections within the required clear widths.

UBC Section 3321(c) is amended to read as follows:

UBC Section 3321(c). Corridors. The minimum clear width of a corridor must be 44 inches except as follows:

Corridors serving any Group I, Division 1 Occupancies must be at least eight feet in width; corridors serving any Group I, Division 2 Occupancies must be at least six feet in width.

There may be no change of elevation in a corridor serving nonambulatory persons unless ramps are used.

In Group I, Division 3 Occupancies such as jails, prisons, reformatories, and similar buildings with open barred cells forming corridor walls, the corridor and cell doors need not be fire resistive.

Statutory Authority: *MS s 16B.59 to 16B.73*

1305.6200 TABLE NO. 33-A.

UBC Table No. 33-A is amended as follows:

Delete the right hand column entitled "Access by means of a ramp or an elevator must be provided for the physically handicapped as indicated."

Also delete footnotes 3, 4, 5, 6, 7, 8, 9, and 10, and add the following as footnote 12:

12. Individual stores with less than 1,000 square feet of gross floor area which are located on upper floors may be provided with only one exit when approved by the building official.

Amend use item 23 by adding "See Note 12" after "Stores-Retail Sales Rooms."

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557; 11 SR 1405*

MINNESOTA RULES 1987

129 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.6300

1305.6250 SECTION 3703.

UBC Section 3703(d) is amended to read as follows:

(d) Lining. When required by Table No. 37-B, chimneys must be lined with fireclay flue tile, firebrick, molded refractory units, or other approved lining not less than five-eighths inch thick as set forth in Table No. 37-B. Chimney liners must be carefully bedded in mortar with close-fitting joints left smooth on the inside. Mortar must be refractory mortar complying with ASTM C 105 or an approved equivalent.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.6260 [Repealed, 11 SR 1405]

1305.6270 [Repealed, 11 SR 1405]

1305.6280 SECTION 3801.

UBC Section 3801(c) is amended to read as follows:

(c) Definitions. For the purpose of this chapter, certain terms are defined as follows:

“Automatic fire extinguishing system” is an approved system of devices and equipment which automatically detects a fire and discharges an approved fire extinguishing agent onto or in the area of a fire.

“Combined system” is a system of water piping which serves 2-1/2 inch hose outlets for use by the fire department and also supplies water to automatic fire sprinklers.

“Fire department inlet connection” is a connection through which the fire department can pump water.

“Standpipe system” is a wet system of piping, valves, outlets, and related equipment designed to provide water at specified pressures and installed exclusively for the fighting of fires and classified as follows:

Class I is a standpipe system directly connected to a water supply and equipped with 2-1/2 inch valves and outlets for use by the fire department or trained personnel.

Class II is a standpipe system directly connected to a water supply and equipped with 1-1/2 inch valves and outlets intended for use by building occupants.

Class III is a standpipe system directly connected to a water supply and equipped with both 1-1/2 inch valves and outlets for use by trained building occupants and 2-1/2 inch valves and outlets for use by the fire department or trained personnel.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.6300 SECTION 3802.

UBC Section 3802 is amended by adding a section (h) as follows:

(h) Special Automatic Fire Extinguishing Systems. In all occupancies having commercial-type cooking equipment, automatic fire extinguishing systems complying with the Fire Code must be installed for protection of duct systems, grease removal devices, and hoods and over equipment which may be a source of ignition, such as fat fryers, ranges, griddles, and broilers.

Exception: These requirements do not apply to Group R-3, Group R-4, and Group M occupancies.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

MINNESOTA RULES 1987

1305.6425 AMENDMENTS TO THE UNIFORM BUILDING CODE 130

1305.6400 [Repealed by amendment, 9 SR 1557]

1305.6425 SECTION 3805.

UBC Section 3805(a) is amended to read as follows:

UBC Section 3805(a). General. Standpipes must comply with the requirements of this section and UBC Standard No. 38.2, Section 38.207(a) as amended.

UBC Section 3805(b) is amended to read as follows:

Section 3805(b) Where required. Standpipe systems must be provided as set forth in Table No. 38-A as amended.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.6430 TABLE NO. 38-A.

UBC Table No. 38-A is amended as follows:

Item No. 2 under the occupancy column of Table 38-A is amended to read as follows:

Occupancies 3 stories or more but less than 150 feet in height, except Group R Division 3 or 4, Class II standpipes are not required in Group E or Group R-1 occupancies.

Table No. 38-A is amended by adding a footnote No. 7 to item No. 2 to read as follows:

7. In municipalities which have adopted the Special Fire Suppression System criteria specified in part 1305.6525 (UBC Section 3808), the number of stories must be 4 or more.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.6500 [Repealed by amendment, 9 SR 1557]

1305.6525 SECTION 3808.

UBC Chapter 38 is amended by adding a new section 3808 as follows:

SPECIAL FIRE SUPPRESSION SYSTEMS (OPTIONAL)

UBC Section 3808. For special fire suppression systems requirements, see part 1305.6905 (UBC Appendix Section 3808).

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.6550 SECTION 4305.

UBC Section 4305(e) is deleted.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.6600 SECTION 4701.

UBC Section 4701(a) is amended to read as follows:

UBC 4701(a) General. The installation of lath, plaster, and gypsum board must be done in a manner and with materials as specified in this chapter, in ASTM C926-81 Specifications for Portland Cement and Portland Cement-Lime Plastering, Exterior (Stucco) and Interior, and in ANSI A42.3, 1971 Specifications for Lathing and Furring for Portland Cement and Portland Cement-Lime Plastering, Exterior (Stucco) and Interior; and, when required for fire-resistive construction, also must conform with the provisions of chapter 43.

Other approved wall or ceiling coverings may be installed in accordance with the recommendations of the manufacturer and the conditions of approval.

MINNESOTA RULES 1987

131 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.6905

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.6700 SECTIONS 5001 TO 5006.

UBC Sections 5001 to 5006 are deleted and replaced by Minnesota Rules, chapter 1360.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.6800 SECTIONS 5101 TO 5105.

UBC Sections 5101 to 5104 are deleted. Refer to Minnesota Rules, parts 1320.0100 to 1320.2000.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.6900 SECTION 6001.

Section 6001 of the UBC is amended to read as follows:

UBC Section 6001. The UBC Standards which are referred to in various parts of this code are the Uniform Building Code Standards, 1985 edition, and are a part of this code with the following amendment:

UBC Section 6001, Chapter 25, 25-17 is amended to read as follows:

Chapter 25, 25-17, 2504(c)3, 2510(a), 2510(b), 2510(c), 2510(d), 2510(e), 2510(h), 2513(b) 1&2, 2516(j)1, 3203(c)4, Tables Nos. 25-F, 25-G, 25-H and 47-H Timber Connector Joints, Bolted Joints, Drift Bolts and Wood Screws, Lag Screws. National Design Specification for Wood Construction (1977), National Forest Products Association. Design specification for Light Metal Plate Connected Wood Trusses TPI-85, Truss Plate Institute, and Federal Specification No. FF-N-105B (March 17, 1971).

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

1305.6905 APPENDIX CHAPTER 38.

UBC Appendix Chapter 38 is amended by adding a new section as follows:

SPECIAL FIRE SUPPRESSION SYSTEMS. (OPTIONAL)

Section 3808. (a) General. This section authorizes optional provisions for the installation of on-premises fire suppression systems in new buildings, buildings increased in floor area, and buildings which have the occupancy classification changed.

(b) Municipal option. The sprinkler system requirements in (c) may be adopted with the selection of either item "8" or item "8a" based on local fire suppression capabilities, but without further change by a municipality. When adopted, the requirements are applicable throughout the municipality for new buildings, buildings increased in floor area, and buildings which will have the occupancy classification changed.

(c) Requirements. Automatic sprinkler systems must be installed and maintained in operable condition in buildings in the occupancy classifications listed in items 1 through 13. The square footage requirements stated in the following items establish the threshold where the provisions apply; in the case of mixed occupancies the threshold number of the most restrictive occupancy applies to the entire building, except for minor additions that do not increase the occupant load or significantly increase the fire load.

1. Group A-1 occupancies.

2. Group A-2 occupancies with an occupant load of 300 or more.

3. Group A-2.1 occupancies.
4. Group A-3 occupancies with an accumulative occupant load of 300 or more.
5. Group B-1 service stations with 3,000 or more gross square feet of floor area, not including canopies.
6. Group B-1 parking garages with 5,000 or more gross square feet of floor area.
7. Group B-2 offices and postsecondary classrooms with 8,500 or more gross feet of floor area or three or more stories in height.
8. Group B-2 retail, warehouse, or manufacturing areas with 2,000 or more gross square feet of floor area or three or more stories in height.
- 8a. Group B-2 retail, warehouse, or manufacturing areas with 5,000 or more gross square feet of floor area or three or more stories in height.
9. Group E-1 and E-2 occupancies with 8,500 or more gross square feet of floor area or two or more stories in height.
10. Group E-3 occupancies with an occupant load of 30 or more.
11. Group H-4 occupancies with 3,000 or more gross square feet of floor area.
12. Group R-1 apartment houses with 8,500 or more gross square feet of floor area or with dwelling units on three or more floors. The building official, in consultation with the fire chief, may approve alternate designs which have fire protection capabilities equivalent to systems complying with UBC Standard 38-1.

That portion of the automatic sprinkler system within dwelling units in apartment occupancies may be considered complete when protection is provided in all habitable rooms.

13. Group R-1 hotels and motels with 8,500 or more gross square feet of floor area or with guest rooms on three or more floors.

(d) Where automatic sprinkler systems are required by the Minnesota State Building Code regardless of Section 3808, then a complete automatic sprinkler system must be installed in compliance with UBC Standard 38-1.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*

CHAPTER 60, STANDARDS

1305.6910 STANDARD 38-1.

UBC Standard 38-1 is amended to read:

Standard No. 38-1.

Installation of Sprinkler Systems

Amendments

Section 38.102. The National Fire Protection Association Standard 13 adopted by section 38.101 applies to the selection, installation, inspection, maintenance, and testing of sprinkler systems, except as follows:

NFPA Standard 13, Sec. 1-3 Definitions. The following definitions are amended to read as follows:

Authority having jurisdiction. The "authority having jurisdiction" is the building official.

Approved. "Approved" means in accordance with the Uniform Building Code.

Listed. "Listed" means in accordance with the Uniform Building Code.

NFPA Standard 13, Sec. 1-3 is further amended by adding the following definition.

MINNESOTA RULES 1987

133 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.6920

Building official. "Building official" means the officer or other designated authority charged with the administration and enforcement of this standard or the officer's duly authorized representative.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557*

1305.6920 STANDARD 38-2.

Subpart 1. **Section 38.202.** UBC Standard 38-2, section 38.202 is amended to read as follows:

Section 38.202 Definitions. Certain terms in this standard are defined as follows:

"Combined system" is a system of water piping which serves 2-1/2 inch hose outlets for use by the fire department and also supplies water to automatic fire sprinklers.

"Fire department inlet connection" is a connection through which the fire department can pump water into a standpipe system, combined system, or sprinkler system.

"Standpipe system" is a wet system of piping, valves, outlets, and related equipment designed to provide water at specified pressures and installed exclusively for the fighting of fires and classified as follows:

"Class I" is a standpipe system directly connected to a water supply and equipped with 2-1/2 inch valves and outlets for use by the fire department or trained personnel;

"Class II" is a standpipe system directly connected to a water supply and equipped with 1-1/2 inch valves and outlets intended for use by building occupants;

"Class III" is a standpipe system directly connected to a water supply and equipped with both 1-1/2 inch valves and outlets for use by trained building occupants and 2-1/2 inch valves and outlets for use by the fire department or trained personnel.

Subp. 2. **Section 38.203.** UBC Standard 38-2, section 38.203, 1.-4., are amended to read as follows:

Section 38.203.1. Class I and Class III standpipe systems — unsprinklered buildings. A Class I and Class III standpipe system in unsprinklered buildings must be sized to provide the following:

A. Standpipes must be sized to deliver 500 gallons per minute (gpm) at a residual pressure of 65 pounds per square inch (psi) at the topmost hose outlet.

B. Supply piping to the standpipes must be sized to deliver 500 gpm for the first standpipe plus 250 gpm for each additional standpipe with a maximum required design for 2,500 gpm.

2. Class I and Class III standpipe systems — fully sprinklered buildings. Class I and Class III standpipe systems in fully sprinklered buildings must be sized to provide the following:

A. Standpipes must be sized to deliver 500 gpm at a residual pressure of 65 psi at the topmost two outlets (250 gpm per outlet).

B. Supply piping to the standpipes must be sized to deliver 250 gpm for the first standpipe plus 250 gpm for each additional standpipe with a maximum required design for 1,000 gpm.

3. Combined systems. In combined systems where sprinkler risers with 2-1/2 inch hose outlets are provided, the risers and supply piping to the risers must be sized to accommodate a supply of 500 gpm at a residual pressure of 65 psi at the topmost two outlets (250 gpm per outlet) or the sprinkler demand including hose demands specified in UBC Standard No. 38-1 as amended in this chapter of Minnesota Rules, whichever is the greater.

MINNESOTA RULES 1987

1305.6920 AMENDMENTS TO THE UNIFORM BUILDING CODE 134

Exception: Unless a larger water supply is required by the building official, supply piping may be sized to provide a maximum water supply of 1,500 gpm for a light hazard occupancy, or 2,000 gpm for an ordinary hazard occupancy.

4. Class II standpipe systems. Class II standpipe piping must be sized to deliver 100 gpm at a residual pressure of 65 psi at the topmost hose outlet except that supply piping serving multiple risers may be sized for a maximum of 100 gpm.

For standpipe or combined systems which exceed 275 feet in height see Section 38.205 for additional requirements.

Subp. 3. **Section 38.207.** UBC Standard 38-2, section 38.207, is amended to read as follows:

Required Water Supplies

Section 38.207. (a) General. Class I, Class II, and Class III and combined systems must be provided with an approved water supply. With prior approval of the fire chief, Class I standpipe systems may be supplied only through a fire department inlet connection.

A minimum of one water supply must be provided which can automatically supply the fire streams and pressures required for the time period specified in this section.

(b) Minimum Water Supply for Class I or Class III Standpipe Systems. The water supply for a Class I or Class III standpipe system must be capable of providing not less than 500 gpm for the first standpipe and 250 gpm for each additional standpipe. The total supply need not exceed 2,500 gpm. The duration of the supply must be for not less than 30 minutes.

The supply must also be capable of maintaining a residual pressure of 65 psi at the topmost outlet of each standpipe with flow rates from the topmost outlets as required by the preceding paragraph.

(c) Minimum Water Supply for Class II Standpipe Systems. The water supply for Class II standpipe systems must be capable of providing not less than 100 gpm for a duration of not less than 30 minutes. The supply must also be capable of maintaining a residual pressure of 65 psi at the topmost outlet for the flow rate specified.

(d) Minimum Water Supply for Combined Systems. For a combined system the water supply must be as required by section 38.207(b) and the sprinkler demand need not be added.

Where the sprinkler system demand, including hose stream allowance as determined by UBC Standard No. 38-1 as amended in Minnesota Rules, part 1305.6910 exceeds the supply required by section 38.207(b), the larger supply must be provided.

Exceptions: (1) Unless a larger water supply is required by the building official, supply piping may be sized to provide a maximum water supply of 1,500 gpm for a light hazard occupancy, or 2,000 gpm for an ordinary hazard occupancy.

Subp. 4. **Section 38.208.** UBC Standard 38-2, section 38.208, paragraph 1, is amended to read as follows:

Section 38.208. Fire Department Inlet Connections. Each Class I or Class III standpipe system or combined system must be equipped with one or more fire department inlet connections. Fire department inlet connection locations must be subject to the approval of the fire department, and the connections must be equipped with approved caps which the fire department can easily remove to make connection. Fire department inlet connections must be protected against mechanical damage and must be visible and accessible. Installation of a shutoff valve in the fire department inlet connection is prohibited.

Subp. 5. **Section 38.210 renumbered 38.211.** UBC Standard 38.2, section 38.210, is renumbered as 38.211 and is amended to read as follows:

MINNESOTA RULES 1987

135 AMENDMENTS TO THE UNIFORM BUILDING CODE 1305.7000

Standpipe outlets

Section 38.211. (a) General. Standpipe outlets for Class I, Class II, and Class III standpipe systems and combined systems must be provided as specified in UBC Section 3805 as amended in Minnesota Rules, part 1305.6400.

Exceptions: 1. In buildings equipped with an approved automatic sprinkler system throughout the Class I outlet locations, including those connections located as specified in UBC Section 3805(c), must be equipped with a 2-1/2 inch by 1-1/2 inch reducer.

Outlet pressures in excess of 100 pounds per square inch must be reduced to not more than 100 pounds per square inch at the required flow by the installation of an approved pressure-reducing device. Unless otherwise permitted by the fire department, the pressure-reducing device must not be of the type which can be adjusted for pressures above 100 pounds per square inch. When adjustable devices are permitted and the outlet pressure may exceed 150 pounds per square inch, signs denoting that fact must be posted at the outlet.

(b) Fire Department Outlets. Fire department outlets must be installed in such a manner as to be easily accessible for use by the fire department. A wrench clearance on all sides of the outlet must be provided to ensure that a 12-inch long wrench can be used to connect hose to the outlet.

Outlets must be provided with an approved hose valve.

Outlets required in smokeproof enclosures must be located within the vestibule or balcony of the smokeproof enclosures.

Fire department outlets for dry standpipes must be identified by an approved sign which specifies "Dry Standpipe for Fire Department Use Only."

(c) Outlet for Occupants' Use. Outlets must be provided with an approved hose valve.

Subp. 6. Section 38.211(b) renumbered 38.212(b). UBC Standard 38-2, section 38.211(b), is renumbered as 38.212(b) and is amended to read as follows:

Hose reels, racks, and cabinets

Section 38.212. (b) Hose for Occupants' Use. Hose outlets of Class II standpipe systems and the 1-1/2 inch Class II outlets of Class III standpipe systems must be provided with an approved lined hose not less than 1-1/2 inches in diameter, capable of withstanding 500 psi test pressure. The hoses must be equipped with an approved variable fog nozzle. Hose provided for rack and cabinet use must be designed to be folded in a pin rack unit.

Subp. 7. Section 38.212 renumbered 38.213. UBC Standard 38-2, section 38.212, is renumbered as 38.213.

Subp. 8. Section 38.213 renumbered 38.214. UBC Standard 38-2, section 38.213, is renumbered as 38.214 and amended to read as follows:

Systems maintenance

Section 38.214. Standpipe systems and combined system must be maintained and tested in accordance with the Minnesota State Building Code and Minnesota Uniform Fire Code.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *9 SR 1557; 11 SR 1405*

1305.7000 VALIDITY CLAUSE.

If any section, subsection, sentence, clause, or phrase of this code is, for any reason, held to be unconstitutional, that decision does not affect the validity of the remaining portions of this code.

The Department of Administration would have adopted this code and each section, subsection, clause, or phrase of this code, whether or not any one or more sections, subsections, sentences, clauses, and phrases is declared unconstitutional.

Statutory Authority: *MS s 16B.59 to 16B.73*

MINNESOTA RULES 1987

1305.7100 AMENDMENTS TO THE UNIFORM BUILDING CODE 136

1305.7100 SPECIAL PROVISIONS FOR THE CITY OF ROCHESTER.

The following sections of the Uniform Building Code, 1985 edition, are amended to read as follows.

UBC Section 3802(f)4 An automatic fire extinguishing system must be installed in Group H, Division 4 occupancies more than one story in height, or exceeding 8,400 square feet in floor area located in Zone No. 1 or No. 2, or exceeding 20,200 square feet in floor area located in Zone No. 3.

UBC Section 3802(d)2 An automatic fire extinguishing system must be installed in Group B occupancies exceeding 13,500 square feet in floor area located in Zone No. 1 or No. 2, or when of Type V construction exceeding 10,500 square feet of floor area located in Zone No. 1 or No. 2, or exceeding 20,200 square feet in floor area located in Zone No. 3.

Exception: Open parking garages.

UBC Section 3802(h) An automatic fire extinguishing system must be installed in Group R1 occupancies exceeding 20,200 square feet in floor area or four stories in height located in Zone No. 1 or No. 2, or exceeding 30,000 square feet in floor area located in Zone No. 3.

Statutory Authority: *MS s 16B.59 to 16B.73*

History: *11 SR 1405*