

Minnesota Attorney General: Administrative Rules Proceedings

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Version 3
August 20, 2018

MINNESOTA STATE REGULATION

Notice of filing by the Commissioner of Administration

We have received on this date, stamped and filed 2 copies of Rules and Regulations pertaining to the Department of Administration - Building Code
(Agency or Board)

Regulation No. SBC 103 thru 303, SBC 8801 thru 8810, MHD 123 + 126 and UBC amendments

Subject: Miscellaneous

Department of Administration
Publication, Central Services Division
Documents Section
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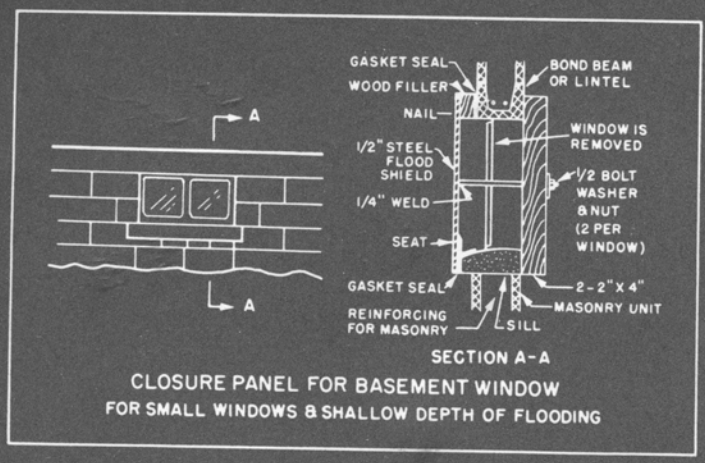
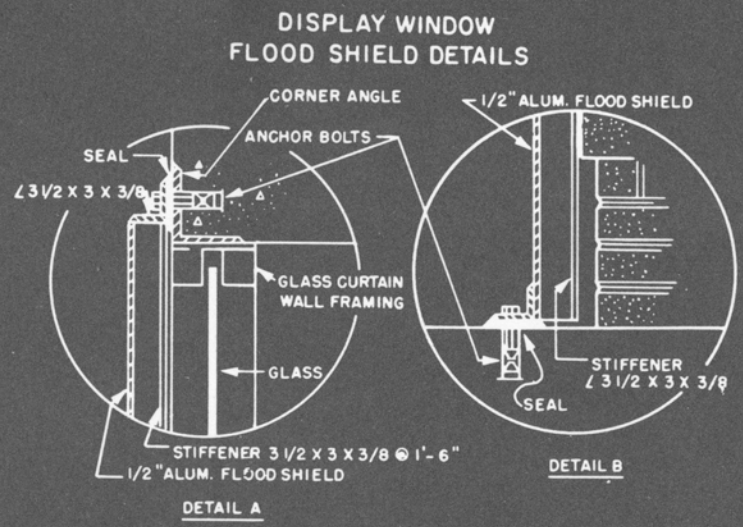
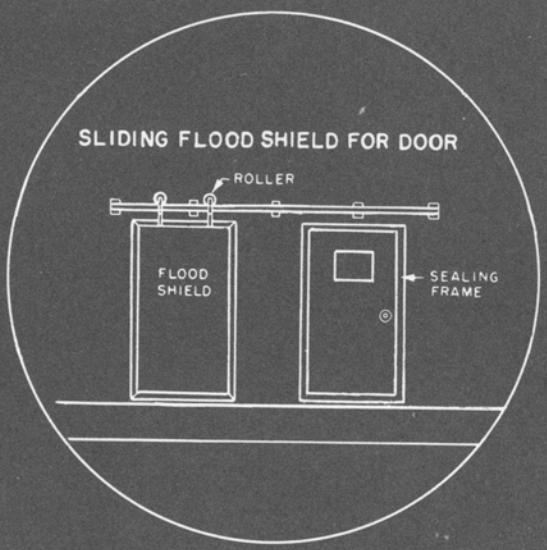
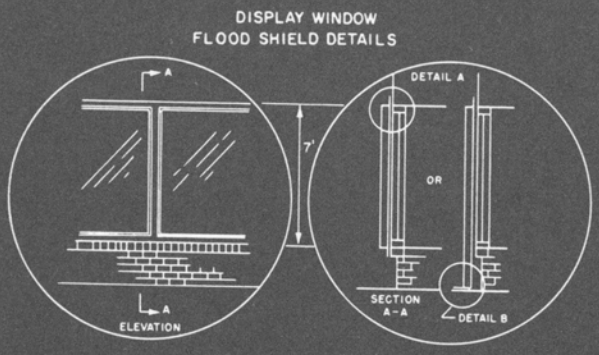
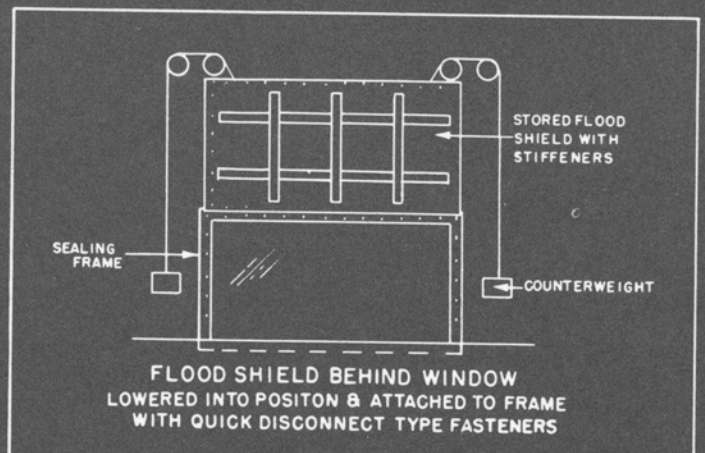






FLOOD-PROOFING REGULATIONS





OFFICE OF THE CHIEF OF ENGINEERS • U.S. ARMY • WASHINGTON, D.C. • JUNE 1972

PREFACE

Existing building codes and regulations do not provide the special flood-proofing requirements and minimum standards of design and construction that should be met for buildings and structures susceptible to flood damages. A need for such standards has long been recognized at all levels of government and in the private sector. However, little, if any, work has been done to develop or assemble information on flood-proofing into a workable set of standards that could have national application. Under its Flood Plain Management Services Program, the Corps of Engineers, has therefore taken the first step towards meeting this need by developing minimum standards of design and construction for flood-proofing of buildings and structures.

This publication specifies the flood-proofing measures and techniques that should be followed to regulate private and public building construction in riverine flood hazard areas. It contains implications for changes in existing building and housing codes and provides for a diversity of flood-proofing methods and techniques. Chapters 2 through 13 have been prepared in a form that could be used to supplement existing building codes and regulations. If, on the other hand, a separate "flood-proofing code" for direct adoption by States and local governments is desired, the flood-proofing information contained herein is also sufficient for that purpose.

The Corps of Engineers is distributing this publication as a means of at least partly filling the present gap in building codes and regulations. Our purpose here is to develop a set of minimum flood-proofing building standards that will be workable, concise, understandable, and reasonable for national application. We also intend that the regulations herein be sufficiently flexible to benefit from expert criticism, further research, and the experience of implementation. Together with other flood plain management tools, use of these ideas will assist in reducing the threat to life, health, and property of users of flood hazard areas and help to achieve optimal flood plain use.

We have taken the first step, however, the initiative for adoption and implementation of these standards must come from State and local interests.

J. W. MORRIS
Major General, USA
Director of Civil Works

This publication was drafted for the Office, Chief of Engineers (OCE) by the U.S. Army Engineer District, Pittsburgh, Pa.



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Version 2
December 6, 2016

The following amendments are adopted:

SBC 103 is amended to read as follows:

General. Buildings or structures to which additions, alterations, or repairs are made shall comply with all the requirements for new buildings or structures except as specifically provided in this Code.

SBC 103 Subsection 4 is amended to read as follows:

4. Nonstructural Alterations and Repairs: 25 Per Cent or Less. Alterations or repairs not exceeding 25 per cent of the value of an existing building or structure, which are nonstructural and do not affect any member of part of the building or structure having required fire resistance, may be made with the same materials of which the building or structure is constructed.

   EXCEPTION: The installation or replacement of glass in hazardous locations, as specified in UBC, Section 5406, shall be as required for new installation.

SBC 103 Subsection 5 is amended to read as follows:

5. Existing Occupancy. Buildings in existence at the time of the passage of this Code may have their existing use or occupancy continued, if such use or occupancy was legal at the time of passage of this Code, provided such continued use is not dangerous to life or property.

   Any change in the use of occupancy of any existing building or structure shall comply with the provisions of UBC, Section 306 and Section 502.

SBC 103 continued next page.

SBC 103 Subsection 6 is amended to read as follows:

6. Moved Buildings. Buildings or structures moved from one location to another location shall comply with the provisions of this Code for New Buildings.

SBC 103 is amended by adding a new subsection to read as follows:

8. Maintenance. All buildings or structures both existing and new, and all parts thereof, shall be maintained in a safe and sanitary condition. All devices or safeguards which are required by this Code in a building or structure when erected, altered, or repaired, shall be maintained in good working order. The owner or his designated agent shall be responsible for the maintenance of buildings or structures.

SBC 103 is amended by adding a new subsection to read as follows:

9. Unsafe Building Appendages. Parapet walls, cornices, spires, towers, tanks, statuary and other appendages or structural members which are supported by, attached to, or a part of a building and which are in a deteriorated condition or are otherwise unable to sustain the design loads which are specified in this Code, are hereby designated as unsafe building appendages. All such unsafe building appendages are public nuisances and shall be abated in accordance with UBC, Section 203, of this Code.

SBC 104 is amended to read as follows:

Wherever the term"Administrative Authority" appears in this Code, the words "Building Official" shall be substituted therefore.

Wherever the terms "Mayor" or "City Council" appear in this Code, the words "Governing Body" shall be substituted therefore.

Wherever the term "City" appears in this Code the word "Municipality" shall be substituted therefore.

SBC 104 continued next page.

SBC 104 Continued:

"Municipality" means any city, village, borough, county, town acting through its town board or other instrumentality of state government otherwise authorized by law to enact a building code, which, as of May 27, 1971, has such a building code or which subsequently enacts a building code.

SBC 108 Fallout Shelters is amended to read as follows:

Whenever it has been determined by the Department of Public Safety, Division of Civil Defense and the State Architectural Engineer that fall-out protection is needed for a particular location the "Technical Requirements for Fall-Out Shelters" as contained in Appendix "B" shall be complied with.

SBC 110 Appendices. All appendices, annexes and supplemental material listed in the Code shall be mandatory in all cases, except for the material listed below, which may be adopted without change at the discretion of any municipality.

1. SBC Appendix A, D, E, and F.
2. 1973 UBC Appendix - Chapters 13, 15, 38, 48, 49, 51, 57, and 70.
3. Minnesota Plumbing Code Appendices A, C, D, and F.
4. Flood Proofing Regulations, Section 201.2 through 208.2.

SBC 201 Adoption of UBC by Reference. Chapters 2 through 60 and appendix of the 1973 Edition of the Uniform Building Code, hereinafter "UBC", as promulgated by the International Conference of Building Officials, is incorporated by reference and hereby made part of the State Building Code, except as qualified by Section SBC 110, said UBC shall constitute chapters 4 through 70 (SBC 401 through 7001) of the State Building Code and shall be subject to the following alterations and amendments:

Chapter 2 - "Organization and Enforcement" of the UBC shall be placed in the appendix of this Code and may be adopted by municipalities, provided, however, that when or where a Board of Appeals is created by a municipality, pursuant to Chapter 2 of the UBC, all decisions or findings by such board shall be reported to the State Building Inspector within fifteen (15) days of such decision or finding.

SBC 201 Continued next page

SBC 201 Continued:

Chapter 3 - "Permits and Inspections" of the UBC shall be placed in the appendix of this Code and may be adopted by municipalities. When permits are required or issued by municipalities for any construction covered by this Code, inspection as set forth in Section 304(d) of the UBC shall be performed for construction regulated by said code, and inspections shall be performed for all permits issued or required for other work or construction regulated by this as are necessary to ensure compliance with this Code.

Chapter 5 of the UBC is amended by adding a new section to read as follows:

512. Roof Access. Unless specifically exempted by the Building Official due to space limitations, roof height above grade or other special considerations, buildings on which any heating, air conditioning, or refrigeration equipment is hereafter installed on the roof and which equipment will require periodic inspection, service and maintenance in accordance with the mechanical code - SBC 7101 through SBC 8810 shall 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 shall be provided to make such equipment safely accessible. Said stair leading to the scuttle or bulkhead shall 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 shall be more than nine inches and handrails shall be provided on both sides of the access stairs. The minimum opening of the scuttle or bulkhead shall be not less than nine square feet in area with the minimum dimension being not less than two feet. In no case shall this required access be located in or pass through the elevator shaft or elevator machine room.

Equipment should be located with at least six feet of clearance from the edge of the roof or similar hazards. If the clearance is less than six feet, a suitable rail or guard not less than forty-two inches in height shall be provided.

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

Chapter 5 of the UBC continued next page

Chapter 5 of the UBC Continued:

Table 5-A, D.2, of the UBC is amended to read as follows:

D.2 Nurseries for full-time care of children under kindergarten age. Hospitals, sanitariums, sanatoriums, nursing homes with non-ambulatory patients, and similar buildings (each accommodating five (5) or more persons).

Table 5-A, D.3 of the UBC is amended to read as follows:

D.3 Boarding care homes, residential care facilities for ambulatory persons, homes for children of kindergarten age or over (each accommodating five (5) or more persons).

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

Section 802(c) Special Provisions. Rooms in Division 1 and 2 Occupancies used for day care purposes, kindergarten pupils and Division 3 Occupancies shall not be located above the first story.

Storage and janitor closets shall be of one-hour fire-resistive construction. Stages and enclosed platforms shall be constructed in accordance with Chapter 39. For attic space partitions and draft stops, see Section 3205.

Section 810 of the UBC is amended as follows:

Section 810 Approved fire alarms shall be provided for all Division 1 and 2 Group C Occupancies with an occupant load of more than 50 persons and in Division 3 Group C Occupancies with an occupant load of more than 29 persons. In every Group C Occupancy provided with an automatic fire-extinguishing or detection system, the operation of such system shall automatically activate the school fire alarm system.

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

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

1. A complete non-coded continuously sounding until manually reset, electrically supervised type.

Section 810 continued next page.

Section 810 of the UBC continued:

2. Shall have sounding stations on 100 foot to 150 foot spacing; (a) in corridors, (b) in areas of high noise levels, such as band rooms, shops, boiler rooms, (c) a weatherproof station on exterior of building facing residential areas.

3. Shall have automatic sending stations (detectors) in boiler rooms, kitchens, shops, painting areas, lounges, laundries, janitors' closets, storerooms, etc., or unsupervised and unoccupied spaces; namely, critical or hazardous areas.

4. Manual sending stations shall be provided in the natural path of escape from fire, near each exit from an area, on each floor, and shall be readily accessible, unobstructed and at visible locations.

Section 901 of the UBC is amended to read as follows:

Division 2. Hospitals, sanitariums, sanatoriums, nursing homes and similar buildings, nurseries for full-time care of children under kindergarten age (each accommodating five (5) or more persons).

Division 3. Boarding care homes, residential care facilities for ambulatory persons, homes for children of kindergarten age or over, (each accommodating five (5) or more persons). Residential care facilities for ambulatory persons shall include, but not be limited to facilities for the treatment of alcoholism or drug dependency, for retarded children and adults, and child care institutions.

For Occupancy Separations see Table No. 5-B.

For Occupant load see Section 3301.

EXCEPTION: Group D Occupancies shall not include buildings used only for private residential purposes or for a family group.

Section 902(b) of the UBC is amended to read as follows:

Section 902(b) Special Provisions. Division I Occupancies shall be housed in buildings of Type I or Type II construction.

Every story of a Group D, Division 2 Occupancy accommodating more than five (5) non-ambulatory persons, unless provided with a horizontal exit, shall be divided into not less than two compartments accommodating approximately the same number of non-ambulatory persons in each compartment by a smokestop partition meeting the requirements of a one-hour occupancy separation so as to provide an area of refuge within the building.

Corridor openings in the smokestop partition shall be protected with doors as required in Section 3304(h). Other openings shall be 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.

Rooms occupied by inmates or patients whose personal liberties are restrained, shall have noncombustible floor surfaces. For attic space partitions and draft stops, see Section 3205.

Section 905 of the UBC is amended to read as follows:

Section 905. All portions of Group D Occupancies customarily used by by human beings shall be provided with light and ventilation by means of windows or skylights with an area equal to one-eighth of the total floor area, one-half of which shall be openable, or shall be provided with artificial light and a mechanically operated ventilating system as specified in Section 605 and SBC 7720.

Section 909 of the UBC is amended to read as follows:

Section 909. An approved fire alarm system shall be provided for all Group D Occupancies.

Audible alarm devides shall be used in all non-patient areas. Visible alarm devides may be used in lieu of audible devices in patient occupied areas. An approved alarm system shall comply with Section 810.

Section 1307(a) of the UBC is amended to read as follows:

Section 1307(a). Ceiling Heights. Habitable rooms shall have a ceiling height of not less than 7 feet 6 inches. Hallways, corridors, bathrooms, storage rooms, laundry rooms and water closet rooms shall have a ceiling height of not less than 7 feet measured to the lowest projection of the ceiling.

If any room in a building immediately below a sloped roof has a sloping ceiling caused by the slope of the roof, the prescribed ceiling height for the room is required in only one-half the area thereof. No portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.

If any room has a furred ceiling, the prescribed ceiling height is required in two-thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet.

Any portion of a garage shall have an unobstructed headroom clearance of not less than 6 feet 6 inches above the finish floor to any ceiling, beam, pipe, or similar construction except for wall-mounted shelves, storage surfaces, racks, or cabinets.

Chapter 13 of the UBC is amended by adding a new section to read as follows:

Section 1314. Sound Transmission Control.

Sound tranmission control shall be provided to meet the standards defined in UBC Appendix Chapter 35.

Chapter 13 of the UBC is amended by adding a new section to read as follows:

Section 1315. Deadbolt Locks Required. All exit doors leading to public areas from all dwelling units and hotel units shall be provided with deadbolt locks, at least one of which must be capable of being locked from the exterior of said 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.

Deadbolt locks having a bolt moved by turning a key shall be of the five-pin tumbler type or an approved equivalent. Lock throw shall be not less than three-quarters inch (3/4"). Locks shall meet the requirements of UBC, Section 3303(c).

Section 1407(a) of the UBC is amended to read as follows:

Section 1407(a). Ceiling Heights. Habitable rooms, storage rooms and laundry rooms shall have a ceiling height of not less than 7 feet 6 inches. Hallways, corridors, bathrooms, storage rooms, laundry rooms and water closet rooms shall have a ceiling height of not less than 7 feet measured to the lowest projection of the ceiling.

If any room in a building immediately below a sloped roof has a sloping ceiling caused by the slope of the roof, the prescribed ceiling height for the room is required in only one-half the area thereof. No portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.

Section 1407(a) continued next page.

Section 1407(a) continued:

If any room has a furred ceiling, the prescribed ceiling height is required in two-thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet.

Section 1706(d) of the UBC is amended to read as follows:

Section 1706(d). Elevator Shafts. Shafts housing elevators and extending through more than two stories shall be vented to the outside. The area of vents shall be not less than 3 1/2 percent of the area of the elevator shaft, with a minimum of 3 square feet per elevator.

Section 1716 of the UBC is amended to read as follows:

Section 1716. All unenclosed floor and roof openings; open and glazed sides of landings; balconies or porches which are more than 30 inches above grade; and roofs used for other than service of the building, shall be protected by a guard-rail. Guardrails shall be not less than 42 inches in height. Open guardrails and stair railings shall have intermediate rails or an ornamental pattern such that no object 9 inches in diameter can pass through. The height of stair railings may be as specified in Section 3305(i).

EXCEPTION 1: Guardrails need not be provided on the loading side of loading docks.

EXCEPTION 2: In Group I Occupancies guardrails shall be not less than 36 inches in height.

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

Section 2305(c). Snow Loads. Snow loads full or unbalanced shall be considered 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, St. Louis, Scott and Washington. A basic snow load of 30 lbs. per square foot of horizontal projection is required for all other counties not mentioned above.

Section 2305(c) continued next page.

Section 2305(c) continued:

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 Appendix C.

EXCEPTION: These requirements shall not apply to Group I and J Occupancies

Snow loads in excess of 20 pounds per square foot may be reduced for each degree of pitch over 20 degrees by R_S as determined by the following formula:

$$R_S = \frac{S}{40} - \frac{1}{2}$$

WHERE:

R_S = Snow load reduction in pounds per square foot per degree of pitch over 20°.

S = Total snow load in pounds per square foot.

Section 2314(a) of the UBC is amended to read as follows:

Section 2314(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 foundation. The force shall be assumed to come from any horizontal direction.

The provisions of this Section apply to the structure as a unit and also to all parts thereof, including the structural frame or walls, floor and roof systems, and other structural features.

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

Section 2907(a) General. Footings and foundations, unless otherwise specifically provided, shall be constructed of masonry or concrete and in all cases extend below the frost line. Footings shall be constructed of solid masonry or concrete. Foundations supporting wood shall extend at least 6 inches above the adjacent finish grade. Footings shall have a minimum depth below finished grade as indicated in Table No. 29-A unless another depth is recommended by a foundation investigation.

In the absence of a determination by an engineer competent in soil mechanics, the minimum allowable footing depth in feet due to freezing shall be five (5) feet in Zone I and three and one-half (3 1/2) feet in Zone II.

Zone I -- Shall include 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, Mahnomen, Marshall, Mille Lacs, Morrison, Norman, Ottertail, Pennington, Pine, Polk, Red Lake, Roseau, St. Louis, Todd, Traverse, Wadena, 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, Wantonwan, Winona, Wright, Yellow Medicine.

When the soil, natural or fill, is sand or pit run sand and gravel, and of a depth in accordance with minimum footings depth requirements for each zone, slab on grade construction which supports roof and wall loads shall be permitted.

EXCEPTION 1: Group J and I Occupancy.

EXCEPTION 2: Lesser depths may be permitted when supporting evidence is presented by an engineer competent in soil mechanics.

Section 2908(b) of the UBC is amended to read as follows:

Section 2908(b) Determination of Allowable Loads. The allowable axial and lateral loads on piles shall be determined by an approved formula by load tests or by soil support characteristics considering the physical properties of the piles used (see Section 2909). A foundation investigation shall be made by an engineer competent in soil mechanics when cast in place piles are used and when otherwise required by the Building Official.

Caissons, when constructed for the support of structures shall be designed in accordance with accepted engineering practice. A foundation investigation shall be made by an engineer competent in soil mechanics, when required.

Section 3301(c) High Hazard Building is a Group E, Division 1 and 2 Occupancy consisting of a building or buildings which are used for the storage, manufacture or processing of highly combustible or explosive products or materials which are likely to burn with extreme rapidity or which may produce poisonous fumes or explosions; for storage or manufacturing which involves highly corrosive toxic or noxious alkalies, acids or other liquids or chemicals producing flame, fumes, explosives, poisonous irritant or corrosive gases; and for the storage or processing of any materials producing explosive mixtures of dust or which result in the division of matter into fine particles subject to spontaneous ignition.

Section 3303(h) of the Uniform Building Code is amended to read as follows:

Section 3303(h) Change in Floor Level at Doors. Regardless of the occupant load, there shall be a floor or landing on each side of a door. The floor or landing shall be level with, or not more than two inches (2") lower than the threshold of the doorway.

EXCEPTION 1: In Group I Occupancies and within individual units of Group H Occupancies, a door may open on the top step of a flight of stairs or on an exterior landing provided the door does not swing over the top step or exterior landing and the landing is not more than seven and one-half inches (7 1/2") below the floor level.

EXCEPTION 2: In Group I Occupancies, an exterior "storm" door may open and swing over an exterior landing, provided the landing is not more than seven and one-half inches (7 1/2") below either the floor level or the threshold.

Section 3304 of the UBC is amended to read as follows:

Section 3304(h) Openings. Where corridor walls are required to be of one-hour fire-resistive construction by Subsection (g) above, every door opening shall be protected by a tight-fitting smoke barrier and fire assembly having a fire protection rating of not less than 20 minutes when tested in accordance with UBC Standard No. 43-2 without the hose stream test.

Doors shall be maintained self-closing or shall be automatic closing in accordance with Section 4306(b)2. Glazed openings of the size and construction permitted for three-fourths-hour fire door assemblies in Section 4306(f) may be installed in such doors. Other interior openings shall be protected by approved 1/4 inch thick wired glass set in steel frames. The total area of all openings, other than doors, in any portion of an interior corridor shall not exceed 25 per cent of the area of the corridor wall of the room which it is separating from the corridor.

EXCEPTION 1: Protection of openings in the interior walls of exterior exit balconies is not required.

EXCEPTION 2: In Type I and II buildings housing Group F-2 Occupancies, corridor walls may be of approved wired glass set in metal frames. The glass height shall not exceed two thirds (2/3) 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 shall be provided to protect the corridor from the Group F-2 Occupancy area (tenant space). The draft curtain shall be located above the glass and extend a minimum of 24" below any finished ceiling in the tenant space. If the finished ceiling is not a fire-rated assembly, the draft curtain shall extend from the wire glass to a rated ceiling or floor assembly. When the F-2 Occupancy area (tenant space) is protected by an approved automatic fire-extinguishing system for a distance of twelve (12) feet in depth adjoining the corridor, and the corridor is not less than twelve (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 twelve (12) feet in widgth, when the entire story is protected by an approved fire-extinguishing system.

Sec. 3304(h) continued next page

Section 3304(h) continued:

In Buildings of other than Type I or Type II construction, this exception shall not be allowed, unless the entire building is provided with an approved automatic fire-extinguishing system.

Section 3307(b) of the UBC is amended to read as follows:

Section 3307(b) Openings. All openings in a wall which provides a horizontal exit shall be protected by a fire assembly having a fire-resistance rating of not less than one and one-half hours. Such fire assembly shall be maintained self-closing or shall be automatic closing by means of products of combustion detectors other than heat as provided in Section 4306(b)2.

Section 3312(b) of the UBC is amended to read as follows:

Section 3312(b) Exit Signs. At every required exit doorway, and wherever otherwise required to clearly indicate the direction of egress, an exit sign with letters at least 6 inches high shall be provided from all areas serving the occupant load specified in this Subsection. In interior stairways the floor level leading direct to the exterior shall be clearly indicated.

Group A Occupancies and Groups B, D, and H Occupancies with an occupant load of more than 50.

All other occupancies serving an occupant load of more than 100.

EXCEPTION: Main exterior exit doors which obviously and clearly are identifiable as exits need not be sign posted when approved by the Building Official.

Section 3318(c) of the UBC is amended to read as follows:

Section 3318(c) Corridors. The minimum clear width of a corridor shall be 44 inches, except that corridors serving any area housing one or more non-ambulatory persons shall be not less than eight feet (8') in width. There shall be no change of elevation in a corridor serving non-ambulatory persons unless ramps are used. Boarding care homes and other institutions for residential and ambulatory care shall have a minimum corridor width of six feet (6').

In Group D-1 Occupancies such as jails, prisons, reformatories and similar buildings with open barred cells forming corridor walls, the corridors and cell doors need not be fire-resistive.

Section 3801(c) Fire Department Standpipe is a fire line system with a constant water supply and pressure and equipped with Fire Department inlet and outlet connections and installed exclusively for the use of the Fire Department.

Section 3802(d) Special Automatic Fire-Extinguishing Systems. In all Occupancies having commercial cooking equipment (see NFPA No. 96A, 1971) automatic fire extinguishing systems complying with UBC Standard 38-1 or 38-2 shall be installed for protection of duct systems, grease removal devices, hoods and over commercial cooking equipment which may be a source of ignition (such as fat fryers, ranges, griddles and broilers). Systems installed in accordance with the following standards are also permitted:

1. Standard for foam-water sprinkler systems and foam-spray systems, NFPA No. 16.

2. Standard for dry-chemical extinguishing system, NFPA No. 17.

EXCEPTION: These requirements shall not apply to Group I Occupancies.

Section 3803 of the UBC is amended to read as follows:

Section 3803(a) General. Fire Department Standpipes shall comply with the requirements of this Section and NFPA 14 - 1973 for Class I standpipes.

Section 3803(b) Where required. All buildings three or more stories in height, shall be equipped with one or more Fire Department Standpipes.

Section 3803(c) Location. There shall be one Fire Department Standpipe outlet connection located at every floor level landing above the first floor of every required enclosed stairway or smokeproof enclosure. Outlets at enclosed stairways shall be located within the enclosure. No point within a building requiring Fire Department Standpipes shall be more than 130 feet travel distance from a Fire Department Standpipe outlet connection.

Portions of Fire Department Standpipe systems not located within an enclosed stairway or smokeproof enclosure shall be protected by a degree of fire resistance equal to that required for vertical enclosures in the building in which they are located.

Section 3803(d) Detailed Requirements.

1. Construction. Fittings and connections shall be of sufficient strength to withstand 300 pounds per square inch of water pressure when ready for service. All Fire Department Standpipes shall be tested hydrostatically to withstand not less than 200 pounds per square inch of pressure for two hours, but in no case shall the pressure be less than 50 pounds per square inch above the maximum working pressure.

Section 3803(d) 3. Size. The size of the standpipe shall conform to Chapter 2 of NFPA No. 14 - 1973 Edition.

Section 3803(d) 4. Fire Department Connections. All Fire Department Standpipes shall be equipped with a two-way siamese fire department connection. Fire Department connections shall be interconnected in the system and shall be located on a street front, not less than 18 inches nor more than 4 feet above grade and shall be eqipped with an approved straightway check valve and substantial plugs or caps. All fire department connections shall be protected against mechanical injury and shall be visible and accessible. More than one fire department connection may be required.

Section 3803(d) continued next page.

Section 3803(d) continued:

Section 3803(d) 5. Outlets. Each standpipe shall be equipped with an approved 2 1/2 inch Outlet not less than 2 feet nor more than 4 feet above the floor level of each story. All Fire Department Standpipes shall be equipped with a two-way, 2 1/2 inch outlet above the roof line of the building when the roof has a pitch of less than 4 inches in 12 inches and installed in a stairway or heated location. All outlets shall be installed so that a 12 inch long wrench may be used in connecting the hose with clearance for the wrench on all sides of the outlet. Standpipes located in smokeproof enclosures shall have outlets located in the vestibule or on the balcony. Standpipe outlets in stairway enclosures or smoke towers shall be so located that the exit doors do not interfere with the use of the outlet. All outlets shall be equipped with an approved valve, cap and chains.

Section 3803(d) 6. Water Supply. The standpipe system shall deliver a water supply as required by Chapter 5, Water Supplies, NFPA No. 14 - 1973.

Section 3803(e) Dry Standpipes, when approved by the Fire Chief, may be installed in lieu of Fire Department Standpipes and shall conform to Section 3803 unamended of the UBC 1973 Edition.

Section 3804(b) of the UBC is amended to read as follows:

Section 3804(b) Where Required. Wet Standpipes extending from the cellar or basement into the topmost story shall be provided in Groups A and B, Division 1 and 2 Occupancies with an occupant load exceeding 1,000; in Groups D, E, F, and G Occupancies three or more stories in height; and in Groups E and F Occupancies having a floor area exceeding 20,000 square feet per floor.

EXCEPTION 1. Wet Standpipes are not required in buildings equipped throughout with an automatic fire-extinguishing system.

EXCEPTION 2. Wet Standpipes are not required in basements or cellars equipped with a complete automatic fire-extinguishing system.

EXCEPTION 3. Wet Standpipes shall not be required in assembly areas used solely for worship.

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

Section 4701(a) General. The installation of lath, plaster and gypsum wallboard shall be done in a manner and with materials as specified in this Chapter, or as set forth in ANSI A42, 2, 1971 Specifications for Portland Cement and Portland Cement-Lime Plastering, Exterior (Stucco) and Interior and ANSI A 42, 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 shall comply 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.

Sections 5001 through 5006 of the UBC are deleted and replaced by SBC 301 through 337.

UBC Appendix has been amended to read as follows:

UBC Appendix - the following Chapters are Mandatory:

23, and 35.

SBC 202 Mechanical Code has been amended to read as follows:

SBC 202 Mechanical Code. All references in the Uniform Building Code to the Uniform Mechanical Code, shall be referred to and regulated by the Minnesota Heating, Ventilating, Air Conditioning and Refrigeration Code.

SBC 203 Adoption of Flood Proofing Regulations by Reference has been amended to read as follows:

> Flood-Proofing Regulations, as promulgated by the Office of the Chief of Engineers, U.S. Army, June, 1972, is hereby adopted by reference and made a part of the State Building Code, subject to the following amendments:

(Sections 201.2 through 208.2 are placed in the appendix of this Code)

Section 200.2 is amended to read as follows:

> Section 200.2 Official Flood Plain Zoning Map: The Official Flood Plain Zoning Map showing the extent and boundaries of the Primary and Secondary Flood Hazard Areas is hereby declared and established as a part of these Regulations. Hereinafter reference to the term Primary Flood Hazard Areas in these regulations shall be synonymous with the term "flood plain areas" as used in Minnesota Regulations NR 85-93.

Section 200.3 is amended to read as follows:

> Section 200.3 Regulatory Flood Datum: For the purpose of these regulations, the Regulatory Flood Datum, or as hereinafter referred to as the "RFD", is hereby declared and established for use as the reference datum for determining the elevation above mean sea level to which flood-proofing protection shall be provided.
>
> Hereinafter reference to the term "Regulatory Flood Datum" in these regulations shall be synonymous with the term "flood protection elevation" as used in Minnesota Regulations NR 85-93

Section 201.1 is amended to read as follows:

> Section 201.1 Application: These Regulations shall apply to the construction, alteration, and repair of any building or parts of a building or structure in the Flood Hazard Area(s) of the municipalities. Additions, alterations, repairs, and changes of use or occupancy shall comply with all provisions for new buildings and structures as otherwise required in the Building Code, except as specifically provided in these Regulations.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 201.2 is amended to read as follows:

Section 201.2 Nonconforming Use: A structure or the use of a structure or premises which was lawful before the passage or amendment of the ordinance but which is not in conformity with the provisions of these Regulations may be continued subject to the following conditions:

1. No such use shall be expanded, changed, enlarged or altered in a way which increases its nonconformity.

2. No structural alteration, addition, or repair to any conforming structure over the life of the structure shall exceed 50 per cent of its value at the time of its becoming a nonconforming use, unless the structure is permanently changed to a conforming use.

3. If such use is discontinued for 12 consecutive months, any future use of the building premises shall conform to these Regulations. The assessor shall notify the zoning administrator in writing of instances of nonconforming uses which have been discontinued for a period of 12 months.

4. If any nonconforming use or structure is destroyed by any means, including floods, to an extent of 50 per cent or more of its assessed value, it shall not be reconstructed except in conformance with the provisions of these Regulations; provided, the Board of Appeals may permit reconstruction if the use or structure is located outside the floodway and is adequately and safely flood-proofed, elevated, or otherwise protected in conformance with these Regulations.

5. Uses or adjuncts thereof which are or become nuisances shall not be entitled to continue as nonconforming uses.

6. Except as provided in "The Building Code", any use which has been permitted as a special exception shall not be deemed a nonconforming use but shall be considered a conforming use.

7. Any alteration, addition, or repair to any nonconforming structure which would result in substantially increasing its flood damage or flood hazard potential shall be protected as required by these Regulations.

8. The Building Official shall maintain a list of nonconforming uses including the date of becoming nonconforming, assessed value at the time of its becoming a nonconforming use, and the nature and extent of nonconformity. This list shall be brought up-to-date annually.

9. The Building Official shall prepare a list of those nonconforming uses which have been flood-proofed or otherwise protected in conformance with these Regulations. He shall present such list to the Board of Appeals which may issue a certificate to the owner stating that such uses, as a result of these corrective measures, are in conformance with these Regulations.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 203.3 is amended to read as follows:

Section 203.3 Records: Copies of such tests reports, certifications, or the results of such tests shall be kept on file in the office of the Building Official for a period of not less than two (2) years after the approval and acceptance of the completed structure for beneficial occupancy.

Section 204.6 is amended to read as follows:

Section 204.6 Board of Appeals: In order to determine the suitability of alternate materials and methods of construction and to provide reasonable interpretations of the provisions herein, there shall be and is hereby created a Board of Appeals of five (5) members. Each member of the Board shall be a licensed professional architect or engineer, or a builder or superintendent of building construction, with at least ten years experience, for five years of which he shall have been in responsible charge of work. At no time shall there be more than two members from the same profession. At least one of the members shall be a licensed structural or civil engineer with architectural engineering experience. The Board shall adopt reasonable rules for its investigations and shall render written decisions to the Building Official.

Section 204.7 is amended to read as follows:

Section 204.7 Validity: It shall be unlawful for any person, firm or corporation or agency (State or local) to erect, construct, enlarge, alter repair, move, improve, remove, convert, or demolish, any building or structure in the Flood Hazard Area(s), or cause the same to be done, contrary to or in violation of any of the provisions of these Regulations and/or "The Building Code".

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 205.1 is amended to read as follows:

Section 205.1 Statement of Intention to Improve: The Owner or any registered architect or licensed professional engineer authorized to represent the Owner shall, before preparing final plans for any improvement in the Flood Hazard Area(s), file with the Building Official a Statement of Intention to Improve, including a brief description of the type of improvement being considered and giving its precise location, on a form provided by the Building Official. The Building Official shall note on two copies the elevation of the RFD at the location of the proposed improvement. One copy of the Statement of Intention to Improve shall be retained by the Building Official until a permit for improvement on the site is approved or one year has elapsed; a second copy shall be returned to the Owner for his use in final siting and design of his improvement. Assignments of the RFD elevations at all locations shall be made from profiles and/or cross sections provided by the Army Corps of Engineers, SCS, USGS . This information shall be open to public examination at all reasonable times.

Section 205.2 is amended to read as follows:

Section 205.2 Permits Required: No person, firm or corporation shall erect, construct, enlarge, alter, repair, move, remove, convert, or demolish any building or structure or any part thereof, or make any other improvement within the Flood Hazard Area(s), or cause same to be done, without first obtaining a separate building flood proofing permit for any such improvement from the Building Official. Ordinary minor repairs may be made with the approval of the Building Official without a permit, provided that such repairs shall not violate any provisions of these Regulations or of "The Building Code".

Section 205.3 (2) is amended to read as follows:

Section 205.3:

(2) Two (2) sets of complete plans and specifications, in addition to plans and specifications required by "The Building Code", except that plans and specifications for any and all proposed improvements in the primary Flood Hazard Area(s) shall be prepared by an engineer or architect licensed by the State to practice as such. All drawings and specifications shall bear the name of the author thereof in his true name, followed by such title as he may be lawfully authorized to use. All plans and sections shall be noted with the proposed flood-proofing class of each space below the RFD including detail drawings of walls and wall openings.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 205.3 (3) is amended to read as follows:

Section 205.3
(3) Two (2) copies of the Owner's Contingency Plan, which shall describe in detail all procedures for temporary placement and removal or contingent protection proposed for items in spaces affected by these Regulations including:

(a) Plans and schedules for items to be removed and locations of placed above the RFD to which they will be removed if these contents violate restrictions associated with the flood-proofing class of the space in which they are placed temporarily, including specific organizational responsibilities for accomplishing this removal.

(b) Procedures, materials and equipment for protecting items required to have protection by their flood-proofing class, but for which this protection is proposed to be provided contingently, including specific organizational responsibilities for accomplishing this protection.

Waivers of restrictions implicitly requested by submission of the Owner's Contingency Plan may be granted by the Building Official as provided by 1101.2

Section 209.1 is amended to read as follows:

Section 209.1 New Building and Structures: Every building or structure hereafter erected, that is located in the primary Flood Hazard Area(s) where the ground surface is two (2) feet or more below the RFD, or where flood water velocities may exceed five (5) feet per second, shall be provided with an inclosed refuge space above the RFD of sufficient area to provide for the occupancy load with a minimum of 12 square feet per person. It shall be provided with one or more exits through the exterior walls above the RFD to an exterior platform and stairway not less than three (3) feet wide.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 209.3 is amended to read as follows:

Section 209.3 Use of Space Below the Regulatory Flood Datum: No floor level or portion of the building or structure that is below the RFD regardless of structure or space classification shall be used for human occupancy, or for storage of any property, materials, or equipment that might constitute a safety hazard when contacted by flood waters.

Section 210.7 is amended to read as follows:

Section 210.7 Placard Types: Placards shall be white rigid plastic or other non-water susceptible material eight (8) inches long and twelve (12) inches wide, and shall have printed thereon in black letters the information shown in Figure 2.

Section 300.0 is amended by adding a subsection to read as follows:

Section 300.2 Interpretation: For the purpose of these regulations, where definition of terms as set forth in this Chapter conflict in meaning with those as set forth in Minn. Regs. NR 85(c), the latter shall take precedence.

Section 301.2.9 is amended to read as follows:

Section 301.2.9 Habitable Room: A space used for living, sleeping, eating or cooking, or combination thereof, but not including bathrooms, toilet compartments, closets, halls, storage rooms, laundry and utility rooms, cellars and similar spaces.

Section 301.4.1 is amended to read as follows:

Section 301.4.1 Building Code: The State Building Code setting forth standards for the construction, addition, modification and repair of buildings and other structures for the purpose of protectecting the health, safety, and general welfare of the public.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 402.1 (Table 2) is amended to read as follows:

Section 402.1 General: Table 2 indicates the various degrees of protection required to permit uses of spaces for each flood-proofing class. Although spaces must meet the requirements shown for each element of flood-proofing, the chart in itself shall not be construed as being exhaustive with respect to all requirements imposed by these Regulations. In disputes arising over the interpretation of this chart, the written provisions of these Regulations shall be considered as definitive.

Table 2

SPACE CLASSIFICATION CHART

FLOOD-PROOFING CLASSIFICATION OF SPACES									
	MINIMUM REQUIREMENTS								
Flood-Proofing Classes	Water-Proofing	Structural Loads	Closure of Openings	Internal Flooding & Drainage	Flooring	Walls and Ceilings	Contents	Electrical	Mechanical
W1 Completely Dry	Type A	Class 1	Type 1	See Chapter 8	Class 1	Class 1	Class 1	See Chapter 12	See Chapter 13
W2 Essentially Dry	Type B	Class 1	Type 1		Class 2	Class 2	Class 2		
W3 Flooded with Potable Water	Type A	Class 2	Type 3		Class 3	Class 3	Class 3		
W4 Flooded with Flood Water	Type C	Class 3	Type 4		Class 4	Class 4	Class 4		
W5 Non-Flood-Proofing	—	—	Type 5		Class 5	Class 5	Class 5		

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 612.2.1 is amended to read as follows:

Section 612.2.1 Natural Terrain: In addition to the requirements of "The Building Code", the building shall be located not less than fifteen (15) feet back from the line of incidence of the RFD on the ground, foundation design shall take into consideration the effects of soil saturation on the performance of the foundation, the effects of flood waters on slope stability shall be investigated, normal access to the building shall be by direct connections with areas above the RFD and all utility service lines shall be designed and constructed as required to protect the building and/or its components from damage or failure during a flooding event to the RFD.

Section 612.2.2 is amended to read as follows:

Section 612.2.2 Building on Fill: The building and all parts thereof may be constructed above the RFD on an earth fill. Prior to placement of any fill or embankment materials, the area upon which fill is to be placed, including a five-foot strip measured horizontally beyond and contiguous to the toe line of the fill, shall be cleared of standing trees and snags, stumps, brush, down timber, logs and other growth, and all objects including structures on and above the ground surface or partially buried. The area shall be stripped of topsoil and all other material which is considered unsuitable by the Building Official as foundation material. All combustible and noncombustible materials and debris from the clearing, grubbing and stripping operations shall be removed from the proposed fill area and disposed of at locations above the RFD and/or in the manner approved by the Building Official. Fill material shall be of a selected type, preferably granular and free-graining, placed in compacted layers. Fill selection and placement shall recognize the effects of saturation from flood waters on slope stability, uniform and differential settlement, and scour potential. The minimum elevation of the top slope for the fill section shall be no more than one foot below the RFD. Minimum distance from any point of the building perimeter to the top of the fill slope shall be either fifteen (15) feet or twice the depth of fill at that point, whichever is the greater distance. This requirement does not apply to roadways, driveways, playgrounds, and other related features which are not integral and functional parts of the building proper. Fill slopes for granular materials shall be no steeper than one vertical on one and one-half horizontal, unless substantiating data justifying steeper slopes are submitted to the Building Official and approved. For slopes exposed to flood velocities of less than five (5) feet per second, grass or vine cover, weeds, bushes and similar vegetation undergrowth will be considered to provide adequate scour protection. For higher velocities, stone or rock slope protection shall be provided.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 802.1 is amended to read as follows:

Section 802.1 Applicability: Spaces to be intentionally flooded with flood water (W4) shall be provided with the necessary equipment, devices, piping, controls, etc. necessary for automatic flooding during the flood event and drainage of the space(s) when flood waters recede.

The automatic flooding and drainage system(s) shall utilize approved piping materials and have sufficient capacity for raising or lowering the internal water level at a rate comparable to the anticipated rate of rise and fall of a flood that would reach the RFD. These pipe systems shall be directly connected to the external flood waters to maintain a balanced internal and external water pressure condition. Provisions shall be made for filling the lower portions of the structure first and for interconnections through or around all floors and partitions to prevent unbalanced filling of chambers or parts within the structures. All spaces below the RFD, shall be provided with air vents extending to at least three(3) feet above the elevation of the RFD to prevent the trapping of air by the rising water surface. All openings to the filling and drainage systems shall be protected by screens or grills to prevent the entry or nesting of rodents or birds in the system.

Section 1301.2.1 is amended to read as follows:

Section 1301.2.1 Heating systems utilizing gas or oil fired furnaces shall have a float operated automatic control valve installed in the fuel supply line which shall be set to operate when flood waters reach an elevation equal to the floor level of the space where furnace equipment is installed. A manually operated gate valve that can be operated from a location above the RFD shall be provided in the fuel supply line to serve as a supplementary safety provision for fuel cutoff. The heating equipment and fuel storage tanks shall be mounted on and securely anchored to a foundation pad or pads of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. As an alternate means of protection, elevation of heating equipment and fuel storage tanks above the RFD on platforms or by suspension from overhead structural systems will be permitted. All unfired pressure vessels will be accorded similar treatment. Fuel lines shall be attached to furnaces by means of flexible or swing type couplings. All heating equipment and fuel storage tanks shall be vented to an elevation of at least three (3) feet above the RFD. Air supply for combustion shall be furnished if required for systems installed in W1 or W2 spaces, and piping or duct work for such purpose shall be terminated at least three (3) feet above the RFD.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 1302.2.2 is amended to read as follows:

Section 1302.2.2 Where the state of dryness of a space is dependent on a sump pump system, or where the stability of a structure during a flood event depends on the relief of up-lift pressures on building components, all interior storm water drainage or seepage, appliance drainage, and underslab drain tile systems shall be directly connected to a sump(pump) and discharged at an elevation at least three(3) feet above the RFD.

Section 1302.2.3.1 is amended to read as follows:

Section 1302.2.3.1 All vents shall extend to an elevation of at least three (3) feet above the RFD.

Section 1302.3 is amended to read as follows:

Section 1302.3 Sewage Disposal/Treatment. Individual sewage disposal and/or treatment facilities will be permitted in a Flood Hazard Area but only at locations where connection with a public sewer system is not possible or feasible. Such facilities shall conform to applicable standards, criteria, rules and regulations of the Minnesota Department of Health and Pollution Control Agency in terms of size, construction, use and maintenance and with standards and criteria of the Minnesota Department of Natural Resources regarding setbacks from the normal high water mark of a water-course in accordance with the public water classification. Installations in low swampy areas or areas where the highest known ground water table is within four feet of the bottom of the soil absorption system or which may be subject to recurrent flooding will not be permitted.

Section 1302.4.1 is amended to read as follows:

Section 1302.4.1 Water supply wells, tanks, filters, softeners, heaters, and all appliances located below the RFD shall be protected against contamination by covers, walls, copings, or castings. All vents shall be extended to a minimum elevation of three (3) feet above the RFD.

SBC 8801 Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts. General. Elevators, dumbwaiters, escalators, manlifts, moving walks, hoists and lifts shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property.

SBC 8802 Definitions. For the purpose of this chapter, the terms or words listed below shall have the meaning indicated:

EXISTING INSTALLATION. Shall mean an installation on which the construction or installation was begun prior to the effective date of this Code.

NEW INSTALLATION. Shall mean an installation on which the construction or installation was begun subsequent to the effective date of this Code.

SBC 8803 Existing Installations is amended to read as follows:

1. All existing installations may be continued in service as long as they are properly maintained and are, in the opinion of the administrative authority, installed and maintained in a safe condition. The Administrative Authority may order the installation of car gates, car tops, and the car walls extended to the car top on all existing installations. The administrative authority shall have the authority to shut down any piece of equipment covered by this chapter, which in his opinion is dangerous to life, limb, and adjoining property, and such equipment shall not be put back into operation until such unsafe condition has been corrected and approved by the Administrative Authority.

2. Any installation which is materially changed subsequent to the date of enactment of this Code shall comply with all of the requirements covering a new installation.

   A material change shall be defined as any change which moves the location, increases or decreases the length of travel, changes the type of operation, increases the speed or carrying capacity or changes the types of power supply of an existing installation.

   Any installation, whether new or existing, which shall become damaged, defective or worn by fire or other causes including ordinary wear to such an extent that, in the opinion of the administrative authority it becomes dangerous to life, limb and adjoining property, such installations shall be repaired or rebuilt in conformity with the provisions of this chapter for new installations. Such equipment shall, if in the opinion of the administrative authority, it is found necessary to protect life, limb and property, be taken out of service until such unsafe condition has been removed.

continued next page.

Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts continued:

SBC 8804 - Inspections, Tests and Approval is amended to read as follows:

1. Approval of Plans. Any person, firm or corporation desiring to install, relocate, alter materially or extend any installation covered by this chapter shall be required to obtain approval for so doing from the administrative authority. Two sets of drawings and specifications showing such installations, relocation, alteration or extension shall be submitted for approval.

2. Inspections and Tests. It shall be unlawful for any person, firm or corporation to put into service any installation covered by this chapter whether such installation is newly installed, relocated or altered materially without such installation being inspected and approved by the administrative authority. The installer of any equipment included in this chapter shall notify the administrative authority seven days prior to completion of the installation for such inspection. The administrative authority shall have the authority to require such tests as provided in ANSI A17.1 - 1971 Edition and Supplements as he may deem necessary to prove the safe operation of any installation.

3. Approval. A certificate or letter of approval shall be issued by the administrative authority for such installation when the entire installation is completed in conformity with this chapter. The entire installation shall include all enclosures or shafts, gates, doors, machinery safety and control devices and all other appurtenances necessary.

SBC 8805

1. To be Reported. The owner or person in control of an elevator or other installation covered by this chapter shall promptly notify the administrative authority of any accident to a person or apparatus, on, about, or in connection with such elevator or other installation, and shall afford the administrative authority every facility for investigating such accident and the damage resulting therefrom. Notification may be given to the administrative authority by telephone or verbally, but such notification shall be confirmed in writing.

SBC 8805 continued next page.

SBC 8805 continued:

2. Investigation. The administrative authority shall make or cause to be made an investigation and the report of such investigation shall be placed on file in his office. Such report shall give in detail the cause or causes, so far as they can determine, and such report shall be open to public inspection.

3. Operation Discontinued. When an accident involved the failure or destruction of a part of the installation or the operating mechanism, the elevator or other installation shall be taken out of service and shall not be used again until it has been made safe and such re-use approved by the administrative authority.

   The administrative authority may, if deemed necessary, order the discontinuance of operation of any such elevator or installation until a new certificate of approval has been issued.

4. Removal of Parts Restricted. No part of the damaged installation, construction or operating mechanism shall be removed from the premises until permission is granted by the administrative authority.

SBC 8806 Elevators, Dumbwaiters, Escalators and Moving Walks has been amended as follows:

1. The eighth edition of American National Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks - ANSI A17.1 - 1971, including supplements A17.1(a) - 1972 and A17.1(b), as amended herein, are hereby incorporated by reference and made a part of this Code.

   All references in ANSI A17.1 - 1971 to the National Electrical Code ANSI C1 - 1968 shall be changed to read, "National Electrical Code, ANSI C1 - 1971 (NFPA 70-1971)."

2. Exceptions and Amendments to ANSI A17.1:

   (a) Winding drum machine. Winding drum machine shall not be permitted on new elevator installations nor replacements on existing installation.

   (b) Swing doors. Horizontal swing doors, either single section or center opening two section, shall not be permitted on new elevator installations nor as replacements on existing installations except the administrative authority may approve such installation if the conditions are such as to make it impossible to install other than swing doors.

SBC 8806 - No. 2 continued next page.

SBC 8806 - No. 2 continued:

(c) Side Exits. Side emergency exits on elevator car shall not be permitted.

(d) Solid Bumpers. Solid bumpers shall not be permitted on new installations nor as a replacement on existing installations.

(e) Clearances. The minimum pit depth shall be not less than three (3) feet. Overhead clearance shall be not less than two (2) feet with piston in stop ring and in no case less than three (3) feet when car is leveled at top landing.

(f) Door Unlocking Devices. Hoistway door unlocking devices shall not be permitted except at the bottom landings.

1. Top and bottom landings shall be provided with hoistway access switches conforming to rule 111.9b and 111.9c of ANSI A17.1971.

2. The door at the lowest landing shall be provided with a special key not easily duplicated and said key shall be available only to elevator mechanics and inspectors. The interlocks shall be designed and adjusted as to prevent movement of the car until after the door is closed and in the locking position.

3. Access to Hoistways for Emergency Purposes.

a. The elevator shall have hoistway doors which are unlocked when closed with the car at floor, or locked but openable from landing by means effective only when car is in landing zone.

b. The operating means for unlocking the doors shall be kept on the premises by the person responsible for the maintenance and operation of the elevators in a location readily accessible to qualified persons in case of an emergency but where they are not accessible to the general public.

(g) Elevator doors shall provide a clear opening of at least 32 inches

(h) Automatic closing doors shall have a closing interval of not less than three (3) seconds except center opening horizontal sliding doors.

SBC 8806 - No. 2 continued next page.

SBC 8806 No. 2 continued:

(i) At least one elevator must be provided for fire department emergency access to all floors. Said elevator cab shall be of such size to accommodate an ambulance cot in its horizontal open position, minimum inside clear platform dimensions of 6'4" X 4'5".

(j) Exterior elevator call buttons shall be placed not higher than 42 inches above the floor. No emergency stop switch, door opening and door closing buttons, or elevator floor selector buttons shall be placed higher than 48 inches above the floor.

(k) Standby Power. In every building over one story and more than 75 feet in height, emergency power shall be provided for at least one elevator in each bank. This emerbency power shall be automatically transferable to any other elevator in the bank and shall be capable of operating the elevator with a full load at contract speed of not less than 150 feet per minute. Emergency power shall be provided by an approved self-contained generator set to operate whenever there is a loss of power in the normal power supply. The generator shall be in a separate room having at least a one-hour fire resistive occupancy separation from the remainder of the building and shall have a fuel supply adequate to operate the equipment for two hours. See UBC Standards 18-1.

(l) Emergency Communications. Every elevator car shall be provided with a two-way communication system connected to an approved emergency service which operates 24 hours every day.

(m) Operating Devices. All operating devices shall be of the enclosed electric type. Rope or rod operated devices activated by hand, or rope operating devides activated by wheels, levers or cranks, shall be removed.

EXCEPTION: This shall not be considered a material change.

(n) Unsafe Conditions. When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the Administrative Authority a full and true report of such inspection and such unsafe condition. If the Administrative Authority finds that the unsafe condition endangers human life, he shall cause to be placed on such elevator, escalator or moving walk in a conspicuous place, a notice stating that such conveyance is unsafe. The owner shall see to it that such notice of unsafe condition is legibly maintained where placed by the Administrative Authority. The Administrative Authority shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance which are necessary to render it safe, and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only by the Administrative Authority when he is satisfied that the unsafe conditions have been corrected.

SBC 8806 No. 2 continued next page.

SBC 8806 No. 2 continued:

(o) A guarded light and convenience outlet shall be provided on the top and underside of each elevator car.

3. Limited Use of an Elevator. When a building or structure is to be equipped with one or more elevators, at least one of such elevators may be approved for limited use prior to the completion of the building or structure.

   The use of such elevators may be permitted by the administrative authority under the authority of a limited permit issued by him for each class of service. Such limited permit shall specify the class of service. Such limited permit shall specify the class of service permitted and it shall not be issued until the elevator has been tested with rated load and the car safety and terminal stopping equipment have been tested to determine the safety of the equipment and until permanent or temporary guards or enclosures are placed on the car and around the hoistway and at the landing entrance on each floor. Landing entrance guards shall be provided with locks that can be released from the hoistway side only. Automatic and continuous pressure elevators shall not be placed in temporary operation from the landing push buttons unless door locking devices and/or interlocks are installed and operative.

4. Access to Elevator Pits. A pit ladder shall be provided for each elevator in all pits where access is from the bottom landing. Access to elevator pits which extend more than eighteen (18) inches below the sill of the pit access door shall have a pit ladder as required.

5. Dumbwaiters and Handpowered Elevators. All dumbwaiters and handpowered elevators shall be equipped with a broken rope safety device.

6. Car Safety Mechanism Switch. Car safety mechanism switches shall be of the manually reset type.

7. Hoistway Door Protection in Passenger Elevators. Hoistway doors on all passenger elevators shall not be solely dependent upon the door edge re-opening device for protection from the doors closing on an obstruction, but shall also be provided with an approved light beam or electronic door protection device.

SBC 8806 continued next page.

SBC 8806 continued:

8. Emergency Elevators. All keyed switches installed to operate elevators on emergency service will be required to be keyed alike to a pattern approved by the Administrative Authority. In lieu of the above, keys for emergency elevator service may be in a metal box placed in a location approved by the Administrative Authority, provided said box is locked with a 5 pin tumbler core lock or equivalent which is keyed to the same pattern.

9. Amendment to ANSI Supplement A17.1(b) - 1973 --Rule 211.3a - Automatic-Operation Elevators is amended to add a new subsection (g).

   (g) One (1) car in each bank of automatic-operation elevators serving three (3) or more landings or having a travel distance of twenty-five (25) feet or more shall be provided with emergency service controls as specified in Rule 211.3a of this supplement.

   Rule 211.3a - Reference to NFPA Standard No. 72d shall be the 1972 Edition and NFPA Standard No. 13 shall be the 1973 Edition.

SBC 8809 is amended to read as follows:

SBC 8809 Temporary Interior and Exterior Hoists. Temporary interior and exterior hoists shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property, shall conform to ANSI 10.4 and Regulations of the Department of Labor and Industry.

SBC 8810 is amended to read as follows:

SBC 8810 Mechanized Parking Garage Equipment. Mechanized parking garage equipment shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property, shall conform to the standards specified in the American Standard Safety Code for Mechanized Parking Garage Equipment ANSI A113.1 (R1971).

continued next page.

Appendix C: Variations of Snow Loads. The minimum snow loads for the design of both ordinary and multiple series roofs, either flat, pitched or curved, shall be determined by multiplying the appropriate snow load given in Section 2305(c) by the appropriate coefficients Cs (See Figures 1, 2, 3 and 4). The full intensity of the roof snow load shall be applied to any one contiguous portion of the roof area if it produces a more unfavorable effect than the full intensity applied over the entire roof area. The basic snow load coefficient Cs shall be increased or decreased in accordance with the following conditions:

1. Decreases

(a) A decrease (due to slide-off of snow load) on the horizontal projection of pitched roofs, of one pound per square foot for each degree, by which the slope angle exceeds 20 degrees. In no case shall the allowable design load be less than 20 pounds per square foot.

TABLE OF PITCH VS. DEGREES:

PITCH	DEGREES
2/12	9° -28'
2½/12	11° -46'
3/12	14° -2'
3½/12	16° -15½'
4/12	18° -26'
4½/12	20° -33'
5/12	22° -37'
5½/12	24° -37'
6/12	26° -34'

(b) A decrease of 20 per cent of the basic uniform snow load may be used for rounded (arch) roofs with a ratio of rise to span between 1/8 and 3/8. Roofs with rise to span ratio equal to or greater than 3/8, the basic uniform snow load may be reduced 40 per cent. In no case shall the allowable uniform snow load be less than 20 pounds per square foot.

SBC Appendix C continued next page.

SBC Appendix C continued:

2. Increases. The basic roof loads shall be increased for the following conditions:

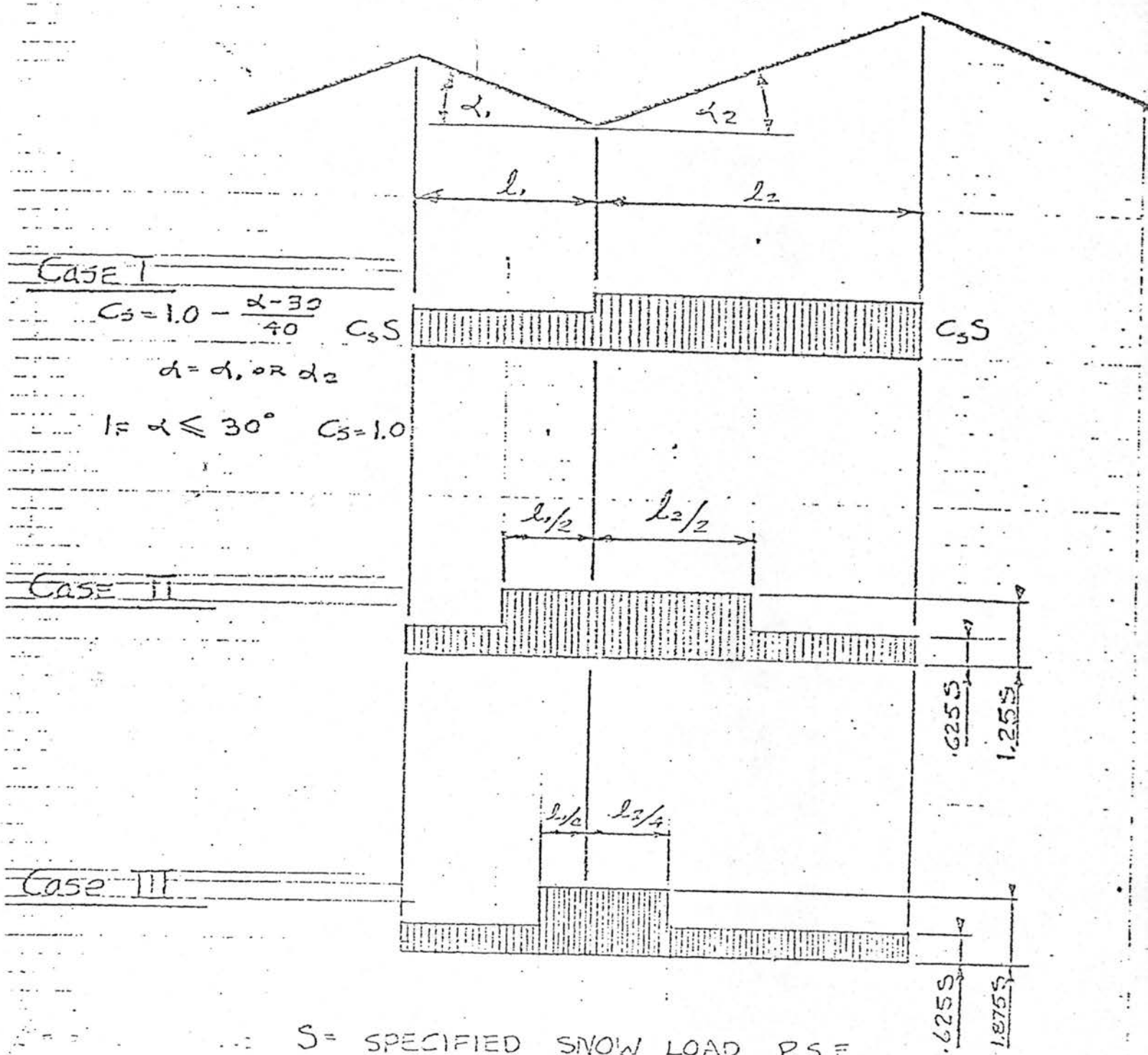
   (a) Roof Valley Condition in accordance with Figure No. 1 and applicable load cases.

   (b) Roof areas abutting vertical walls, of adjacent buildings in accordance with Figure No. 2 and applicable formulas.

   (c) Lower level roof areas abutting sloping upper roof areas in accordance with Figure No. 3 and applicable descriptive conditions.

   (d) Roof areas adjacent to or containing projections and/or obstructions in accordance with Figure No. 4 and applicable formulas.

NOTE: Figures No. 1, No. 2, No. 3 and No. 4 attached.



S = SPECIFIED SNOW LOAD P.S.F.

C_s = COEF. OF INCREASED SNOW LOAD DUE TO LOCATION

$\beta = \frac{\alpha_1 + \alpha_2}{2}$

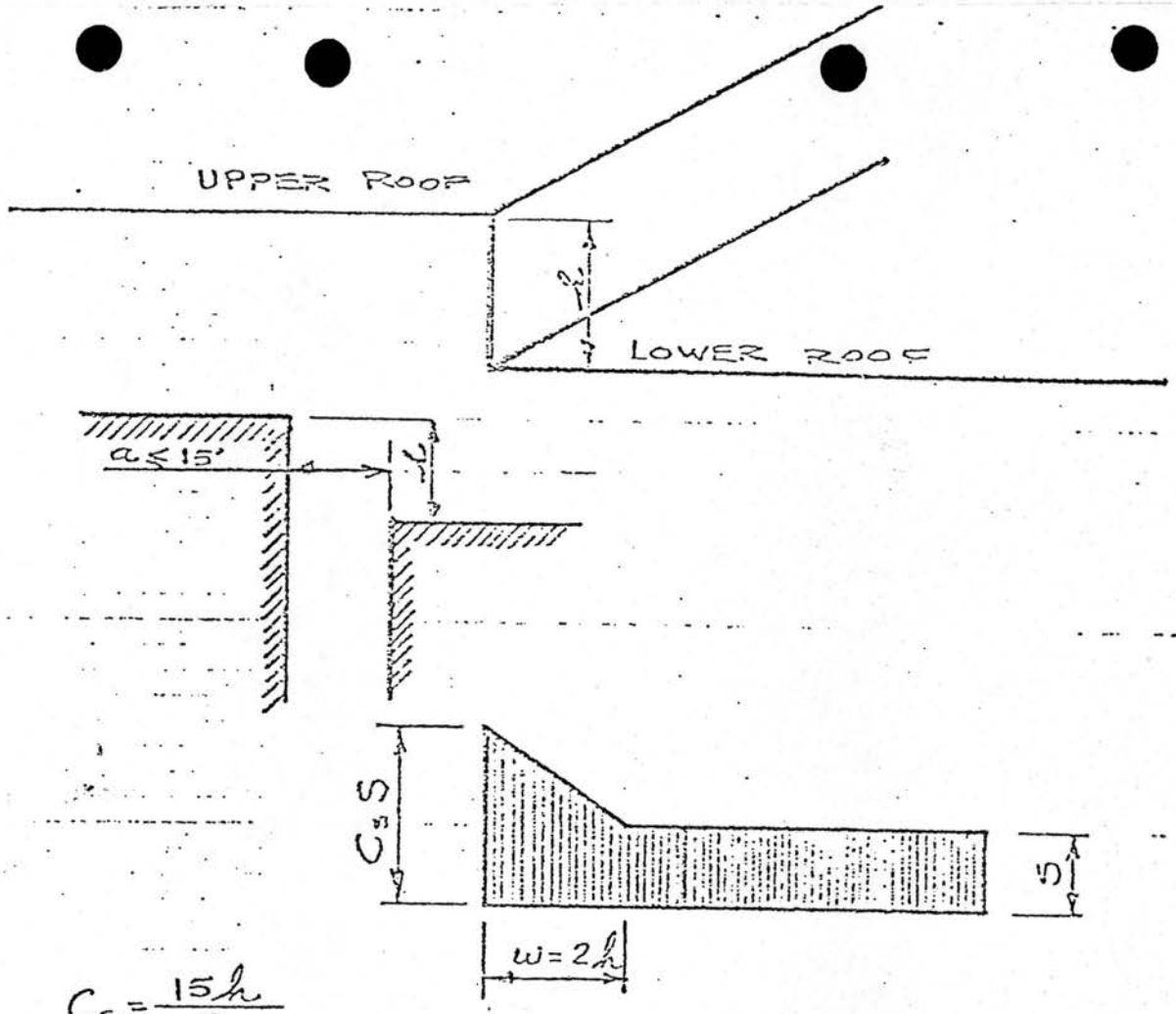
IF $\beta = \leq 10°$ USE CASE I

IF $10° < \beta < 20$ USE CASE I & II

IF $\beta \geq 20°$ USE CASE I, II & III

FIGURE NO. 1

VALLEY AREA OF SLOPED ROOFS



$$C_s = \frac{15h}{S}$$

w (MINIMUM) = 10 FT.
w (MAXIMUM) = 30 FT.

IF $\frac{15h}{S} < 1.0$ $C_s = 1.0$

IF $\frac{15h}{S} > 3.0$ $C_s = 3.0$

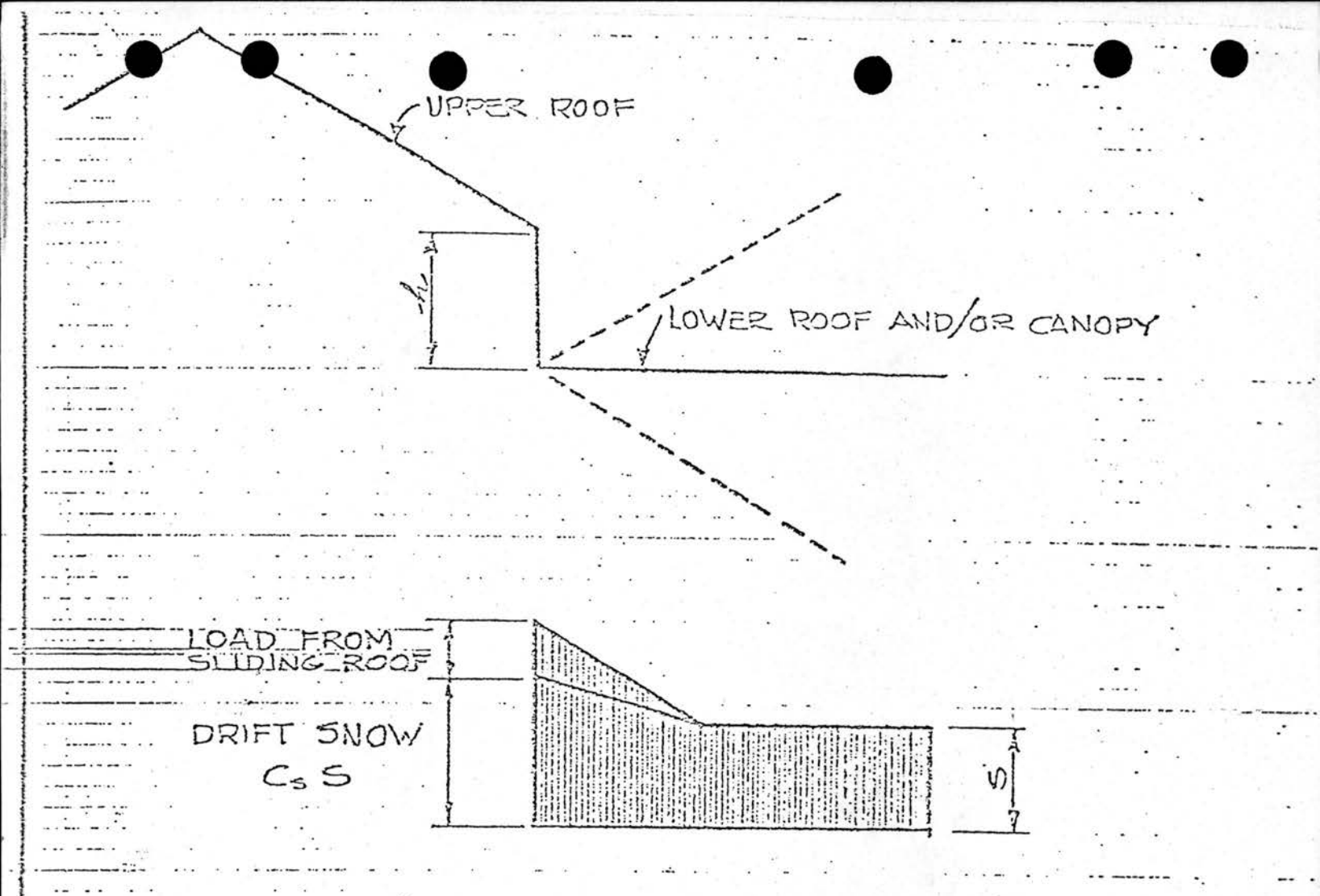
IF $h < 5$ FT. $w = 10$ FT.

IF $h > 15$ FT. $w = 30$ FT.

h = HEIGHT DIFFERENCE IN ROOFS IN FEET
w = WIDTH OF DRIFT IN FEET
a = DISTANCE BETWEEN BUILDINGS IN FEET
S = SPECIFIED SNOW LOAD IN P.S.F.
C_s = COEFFICIENT OF INCREASED SNOW LOAD

FIGURE NO. 2

LOWER LEVEL OF MULTI-LEVEL ROOFS



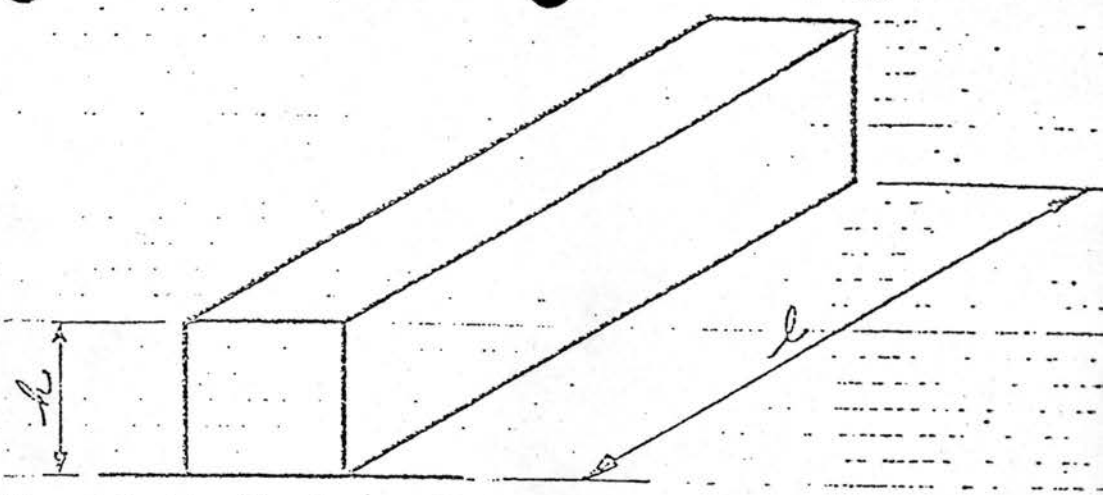
DESIGN LOWER ROOF OR CANOPY FOR LOADS ACCORDING TO FIGURE II + 50% OF DESIGN LOAD FROM UPPER. THE DISTRIBUTION SHOULD BE MADE DEPENDING ON THE RELATIVE SIZES, SLOPES AND POSITIONS OF THE TWO ROOFS.

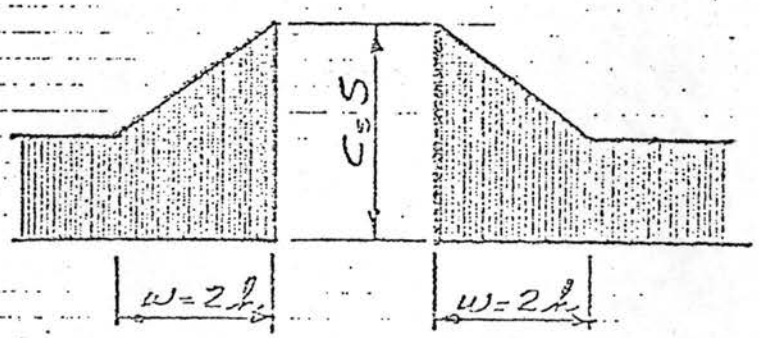
IF, BECAUSE OF A RELATIVELY SMALL LOWER ROOF OR CANOPY, ALL OF THE SLIDING SNOW CANNOT BE RETAINED, APPROPRIATE REDUCTIONS MAY BE MADE. THE DENSITY OF SLIDING SNOW MAY BE RATHER HIGH.

DESIGN UPPER ROOF AS THOUGH IT IS A SINGLE SPAN BUILDING.

FIGURE NO. 5

LOWER ROOF WITH SLIDING UPPER ROOF





w (MINIMUM) = 10 FEET

w (MAXIMUM) = 30 FEET

$$C_s = \frac{10h}{S}$$

IF $\frac{10h}{S} < 1.0$ $C_s = 1.0$

IF $\frac{10h}{S} > 2.5$ $C_s = 2.5$

IF $l < \frac{S}{4.8}$ $C_s = 1.0$

IF $h <$ 5 FEET w = 10 FEET

IF $h >$ 15 FEET w = 30 FEET

h = HEIGHT OF OBSTRUCTION IN FEET

w = WIDTH OF DRIFT IN FEET

l = LENGTH OF OBSTRUCTION OR PROJECTION IN FEET

S = SPECIFIED SNOW LOAD IN P.S.F.

C_s = COEFFICIENT OF INCREASED SNOW LOAD

FIGURE NO. 4

PROJECTIONS & OBSTRUCTIONS

Page 19 Table 123(c)(3) after 3H (Seamless Copper Tube, Type L, Hard Temper) is amended to add the following:

	ASTM	Other Specifications
3H(a) Welded Copper Alloy 194 Water, Tube, Type "Heavy", Hard Temper	B543-72	OFT194-101A Navfac TS-15400
3H(b) Stainless Steel Water Tubing, Type SL, Copper Plated Coating (HWT-T439)	A-268 A-651	

Page 19 Table 123(c)(3) after 3J (Seamless Copper Tube, Type M, Hard Temper) is amended to add the following:

3J(a) Welded Copper Alloy 194 Water Tube, Type "Standard", Hard Temper	B543-72	OFT194-101A Navfac TS-15400
3J(b) Stainless Steel Water Tubing, Type SM, Copper Plated Coating (HWT-T439)	A-268 A-651	

Page 21 Table 123(c)(3) after Special Wastes is amended to add the following:

6J Polypropylene (Type II 24308)	D2146

Minnesota Plumbing Code continued next page.

Minnesota Plumbing Code continued:

Page 22 MHD 123(d)(3) is amended to read as follows:

(ff) Copper tube 3H, 194 Water Tube 3H(a) or Stainless Steel Water Tubing 3H(b) with 3N fittings.

(gg) Copper tube 3J, 3G, 194 Water Tube 3J(a), or Stainless Steel Water Tubing 3J(b) with 3N fittings may be installed exposed or in frame partitions, or in tunnels and shafts, except that this material may not be laid underground or embedded in masonry or concrete.

Page 33 - MHD 126(b)1 is amended to read as follows:

(1) Where Used. Drainage piping serving fixtures that are located below the elevation of the curb or property line at the point where the building sewer crosses under the curb or property line, and above the crown level of the main sewer, shall drain by gravity into the main sewer, and shall be protected from back flow of sewage by installing an approved back water valve, and each such back water valve shall be installed only in that branch or section of the drainage system which receives the discharge from fixtures located below the elevation of the curb or property line.

Further, in every building hereafter erected or remodeled so that the erection or remodeling creates a new dwelling use which is located below the elevation of the point where the building sewer crosses under the curb or property line, all fixtures installed below such point shall be connected to a separate branch drain. Each such branch drain shall be protected by an approved back water valve and a gate valve. The gate valve shall be located on the sewer connection side of the back water valve.

Further, the back water valve and gate valve may be waived by the Administrative Authority whenever the building is located at a sufficient height above the public sanitary sewer so flooding by backflow will not occur, in the opinion of the Administrative Authority.

APPROVED AS TO FORM AND LEGALITY

1/14 1974

WARREN SPANNAUS, ATTORNEY GENERAL

BY [signature]

SPECIAL ASSISTANT ATTORNEY GENERAL

FILED

RICHARD L. BRUBACHER

Commissioner of Administration

JAN 14 1974 3:00pm

BY Eda Stavenmann

AUTH. SIGNATURE

STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED

JAN 14 1974 - 3:45 pm

Arlen I. Erdahl

Secretary of State

STATEMENT OF COMPLIANCE WITH

MANUAL OF RULE MAKING PROCEDURES

I, Special Assistant Attorney General, J. Michael Miles, do hereby declare that I have examined the proposed rules and all related documents and that, based on them and my personal familiarity with the applicable procedures, the Manual of Rule Making Procedures has been followed. Any exceptions are noted below.

J. Michael Miles

SPECIAL ASSISTANT ATTORNEY GENERAL

DATED: 1/14/74

Exhibit #1

STATE OF MINNESOTA

COUNTY OF RAMSEY

BEFORE THE

COMMISSIONER OF ADMINISTRATION

In the matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code

ORDER FOR HEARING

To effectively implement Minnesota Statute 1971, Section 16.86, the Commissioner of Administration deems it necessary to consider adoption of certain amendments to the State Building Code pursuant to the authority vested in the Commissioner by the Statute cited above.

NOW, THERFORE, IT IS ORDERED this 10th day of October, 1973, that a Public Hearing on the proposed amendments be held in the Holiday Inn Downtown on November 26 - 27 and 28, 1973 commencing at 8:01 a.m., and continuing untl all local governmental units, representatives of associations and other interested groups or persons have had an opportunity to be heard.

IT IS FURTHER ORDERED, that notice of said hearing be given pursuant to the provisions of Minnesota Statute 1971, Section 15.0412, Subdivision 4, and to all representatives of associations or other interested groups or persons who have registered their names with the Secretary of State for that purpose and all persons who are presently members of the Minnesota Legislature.

STATE DEPARTMENT OF ADMINISTRATION

Richard L. Brubacher

Richard L. Brubacher
Commissioner of Administration

Exhibit #2

STATE OF MINNESOTA

COUNTY OF RAMSEY

BEFORE THE

COMMISSIONER OF ADMINISTRATION

In the matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code

STATEMENT OF NEED

The above-captioned proposed rules are amendments to the existing State Building Code.

Pursuant to Minnesota Statute 1971, Section 16.86, the Commissioner of Administration is charged with the responsibility of applying the State Building Code to all local governmental units having building codes, with limited exceptions, and with the duty of amending the State Building Code from time to time to maintain the most modern code standards regarding the construction, addition to or alteration of buildings.

Further, the Commissioner of Administration may hold public hearings at such times as interested parties petition for amendments to the State Building Code. Pursuant to Minnesota Statute 1971, Section 15.0412, Subdivision 1 and 4, the Commissioner is empowered to promulgate reasonable substantive rules and may also amend rules as is deemed necessary upon a showing of need for the Amendment subsequent to a Public Hearing. Further, the Commissioner of Administration may hold Public Hearings at such times as interested parties petition for Amendments to the State Building Code. The above captioned Amendments that fall within the above mentioned conditions are deemed of sufficient importance to warrant consideration through the process of Public Hearing.

Richard L. Brubacher

Richard L. Brubacher
Commissioner of Administration

Exhibit #3

STATE OF MINNESOTA

COUNTY OF RAMSEY

BEFORE THE

COMMISSIONER OF ADMINISTRATION

In the matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code

NOTICE OF HEARING

Notice is hereby given that a public hearing will be held pursuant to Minn. Stat., 1971, Section 16.86, and Minn. Stat. 1971, Section 15.0412, Subdivision 4, regarding the above-entitled matter, in the Holiday Inn Downtown, 161 St. Anthony Avenue, St. Paul, Minnesota, commencing at 8:01 a.m., November 26, 1973 and continuing until all local governmental units, all representatives of associations and other interested groups or persons have had an opportunity to be heard concerning adoption of the proposed rules captioned above by submitting either oral or written data, statements or arguments. Statements or briefs may be submitted without appearing at the hearing.

A summary of the proposed amendments to the State Building Code may be obtained directly by writing to: Herbert W. Meyer, State Building Inspector, 408 Metro Square Building, St. Paul, Minnesota 55101. Copies of all said amendments are also available for inspection at the address above-noted and additional copies of the amendment materials will be available at the door on the date of the hearing. Telephone inquiries regarding the amendments should be directed 612-296-4639.

A copy of the procedural rules for the hearing is attached. Testimony or other evidence to be submitted for consideration should be pertinent to the matter at hand and may be presented either orally or in writing at the public hearing or by mailing a statement to Herbert W. Meyer, State Building Inspector, at the above-mentioned address within 20 days following the conclusion of the subject hearing. If the person submitting a statement cannot be present to read his statement at the time of the hearing, the statement will be entered into the record. For those wishing to submit written statement or exhibits, it is requested that at least three (3) copies of such statement, exhibit, or summary be furnished at the hearing. It is suggested that to save time and avoid duplication, those organizations or associations having common viewpoint or interest in these proceedings join together where possible and present a single statement in behalf of such interests.

MINNESOTA DEPARTMENT OF ADMINISTRATION

Richard L Brubacher

Richard L. Brubacher
Commissioner of Administration

PROPOSED AMENDMENTS TO THE STATE BUILDING CODE

PUBLIC HEARING TO BEGIN NOVEMBER 26, 1973

SBC 103	Editorial Change
SBC 103-4	Amendment to glazing requirements (same as 1973 UBC)
SBC 103-5	Amendment to "Existing Occupancy"
SBC 103-6	Editorial Change
SBC 103-8	New Section on Maintenance of existing buildings (Same as 1973 UBC)
SBC 103-9	New Section on Unsafe Building Appendages (same as 1973 UBC)
SBC 104	Amend definition of Municipality to conform with Building Code Statute
SBC 107	Deleted
SBC 108	Editorial Change
SBC 110	New section listing optional code material

EXISTING SBC 201 IS DELETED AND FOLLOWING SUBSTITUTED:

SBC 201 Adoption of 1973 Uniform Building Code by reference with amendments

1. Chapter 2 of UBC - No change
2. Chapter 3 of UBC - No change
3. Add Sec. 512 to provide roof access
4. Amend Table 5-A definition of D-2 Occupancy
5. Amend Table 5-A definition of D-3 Occupancy
6. Sec. 802(c) Amend to permit first and second grade pupils to be located above the first story
7. Sec. 810 Fire Alarm Requirements C Occupancies
8. Sec. 901 Amend definition D-2 Occupancy and D-3 Occupancy
9. Sec. 902(b) Delete exception
10. Sec. 905 Reference mechanical code
11. Sec. 909 Fire Alarm Requirements D Occupancies
12. Sec. 1307(a) Amend ceiling height requirements
13. Add Sec. 1314 to provide sound transmission control
14. Add Sec. 1315 to require deadbolt locks
15. Sec. 1407(a) Amend ceiling height requirements
16. Add Sec. 1414 to provide sound transmission control
17. Sec. 1503 Add exception for detached garages in Fire Zone 3
18. Sec. 1706(d) Deleted
19. Sec. 1716 Amend guardrail height in I Occupancies
20. Sec. 2305 Amend to define snow load zones
21. Sec. 2314(a) Amend to place State in Siesmic Zone 0
22. Sec. 2907(a) Amend to define Frost Penetration Zones
23. Sec. 2908(b) Amend to provide requirement for caissons
24. Sec. 3301(c) Amend by adding definition of High Hazard Building
25. Sec. 3304(h) Amend to provide standards for enclosed malls

26. Sec. 3305(p) Add section to provide for scissors stairs
27. Sec. 3307(b) Amend to require products of combustion detectors on horizontal exits
28. Sec. 3312(b) Amend height of letters on exit signs
29. Sec. 3318(c) Amend corridor widths
30. Sec. 3801(c) Add new definition of Fire Dept Standpipe
31. Sec. 3802(d) Add new section requiring extinguishers in hoods on commercial cooking equipment
32. Sec. 3803 Amend Standpipe Requirements
33. Sec. 3804(b) Amend Wet Standpipe Requirements
34. Sec. 4701(a) Amend to include latest Standards for Lathing and Plastering
35. Sec. 5001 through 5006 deleted and substituted by SBC 301 thru 337
36. Sec. 5101 through 5104 deleted
37. UBC Appendix Chapters 13, 23, 35, 70 - mandatory

SBC 202 Change reference to Uniform Mechanical Code to Minnesota Heating, Ventilating, Air Conditioning and Refrigeration. Code.

SBC 203 Adoption of Flood Proofing Regulations by reference with amendments as follows:

1. Sec. 200.2 Amend terminology to conform to D.N.R. regulations
2. Sec. 200.3 Amend terminology to conform to D.N.R. regulations
3. Sec. 201.1 Completes text
4. Sec. 201.2 Completes text
5. Sec. 203.3 Completes text
6. Sec. 204.6 Completes text
7. Sec. 204.7 Amend to include State or local agencies
8. Sec. 205.1 Amend to delete word primary
9. Sec. 205.2 Amend to delete word primary
10. Sec. 205.3(2) Amend to delete word primary and complete text
11. Sec. 205.3(3) Completes text
12. Sec. 209.1 Amend to delete word primary and complete text
13. Sec. 209.3 Correct typographical error
14. Sec. 210.7 Complete Text
15. Sec. 300.0 Add a Section to define interpretation if conflicts with Minn. Regulations NR 85(c)
16. Sec. 301.2.9 Amend definition to comply with Building Code
17. Sec. 301.4.1 Amend to define Building Code
18. Sec. 402.1 Amend Table 2
19. Sec. 612.2.1 Completes text
20. Sec. 612.2.2 Amend to reduce minimum slope elevation requirements

21. Sec. 802.1 Completes Text
22. Sec. 1301.2.1 Completes Text
23. Sec. 1302.2.2 Completes Text
24. Sec. 1302.2.3.1 Completes Text
25. Sec. 1302.3 Amend to conform with PCA and Minnesota Health Department rules
26. Sec. 1302.3.1 Deleted
27. Sec. 1302.3.2 Deleted
28. Sec. 1302.4.1 Completes Text

SBC 8801 through 8810 Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts

SBC 8803-1 Amend "Existing Installations"
SBC 8806-1 Adopt 1972 and 1973 ANSI A 17.1 supplements
Amend reference to date of electrical code
SBC 8806-2 Amend title
SBC 8806-2(e) Add section to provide pit and overhead clearance
SBC 8806-2(f) Add Section requiring door unlocking devices
SBC 8806-2(g) Add Section on minimum door opening size
SBC 8806-2(h) Add section defining door closing interval
SBC 8806-2(i) Add section to provide emergency access and define minimum car size
SBC 8806-2(j) Add requirements for height of car control buttons
SBC 8806-2(k) Add section to provide emergency power
SBC 8806-2(l) Add section to provide emergency communication
SBC 8806-2(m) Add section to require removal of unsafe operating devices
SBC 8806-2(n) Add section to post notices of unsafe conditions
SBC 8806-2(o) Add section to require lights on top and bottom of car
SBC 8806-5 Editorial Change
SBC 8806-6 Editorial Change
SBC 8806-7 Amend to require protection on all passenger elevators
SBC 8806-8 Amend to require elevator access keys be available to emergency services
SBC 8806-9 Amend ANSI A17.1(b) 1973 supplement
SBC 8809 Amend to reference latest standards
SBC 8810 Amend to reference latest standards

SBC Appendix C - Deleted and replaced by new material

Proposed Amendments - Minnesota Plumbing Code

Table 123(c)(3) Amend to include new materials
MHD 123(d)(3) Amend to include new materials
MHD 123(d)(8) Amend to include new materials
MHD 123(d)(9) Amend to permit use of approved plastics in masonry and under concrete floors
MHD 123(d)(10) Amend to include new materials
MHD 123(d)(11) Amend to permit use of approved plastics in masonry and under concrete floors
MHD 126(b)(1) Amend requirements for installation of back-water valves

SBC 103 is amended to read as follows:

General. Buildings or structures to which additions, alterations, or repairs are made shall comply with all the requirements for new buildings or structures except as specifically provided in this ~~Section~~ Code.

SBC 103 Subsection 4 is amended to read as follows:

4. Nonstructural Alterations and Repairs: 25 Per Cent or Less. Alterations or repairs not exceeding 25 per cent of the value of an existing building or structure, which are nonstructural and do not affect any member or part of the building or structure having required fire resistance, may be made with the same materials of which the building or structure is constructed.

EXCEPTION: The installation or replacement of glass in hazardous locations, as specified in Section 5406, shall be as required for new installations.

SBC 103 Subsection 5 is amended to read as follows:

5. Existing Occupancy. Buildings in existence at the time of the passage of this Code may have their existing use or occupancy continued, if such use or occupancy was legal at the time of passage of this Code, provided such continued use is not dangerous to life or property.

Any change in the use of occupancy of any existing building or structure shall comply with the provisions of UBC 306 and UBC 502.

SBC 103 Subsection 6 is amended to read as follows:

6. MOVED BUILDINGS. Building or structures moved from one location to another location shall comply with the provisions of this Code for New Buildings. ~~when moved to a new location.~~

SBC 103 is amended by adding a new subsection to read as follows:

8. Maintenance. All buildings or structures both existing and new, and all parts thereof, shall be maintained in a safe and sanitary condition. All devices or safeguards which are required by this Code in a building or structure when erected, altered, or repaired, shall be maintained in good working order. The owner or his designated agent shall be responsible for the maintenance of buildings and structures.

SBC 103 is amended by adding a new subsection to read as follows:

9. UNSAFE BUILDING APPENDAGES. Parapet walls, cornices, spires, towers, tanks, statuary and other appendages or structural members which are supported by, attahced to, or a part of a building and which are in a deteriorated condition or are otherwise unable to sustain the design loads which are specified in this Code, are hereby designated as unsafe building appendages. All such unsafe building appendages are public nuisances and shall be abated in accordance with Section 203 of this Code.

SBC 104 is amended to read as follows:

Wherever the term "Administrative Authority" appears in this Code, the words "Building Official" shall be substituted therefor.

Wherever the terms "Mayor" or "City Council" appear in this Code, the words "Governing Body" shall be substituted therefor.

Wherever the term "City" appears in this Code the word "Municipality" shall be substituted therefor.

"Municipality" means any city, village, borough, county, town acting through its town board or other instrumentality of state government otherwise authorized by law to enact a building code, which, as of May 27, 1971, has such a building code or which subsequently enacts a building code.

SBC 107 is deleted.

~~Fire Districts.--When any provision of this Code refers to a Fire District it shall be interpreted as Fire District No. 3.--See Appendix "C".~~

SBC 108 Fallout Shelters.

Whenever it has been determined by the Department of Public Safety, Division of Civil Defense and the State Architectural Engineer that fall-out protection is needed for a particular location the "Technical Requirements for Fall-Out Shelters" as contained in Appendix "B" shall be complied with.

SBC Chapter 1 is amended by adding a new section to read as follows:

SBC 110 Appendices. All appendices, annexes and supplemental material listed in the Code shall be mandatory in all cases, except for the material listed below, which shall be optional:

1. SBC Appendix A, C, D, E and F.

2. 1973 UBC Appendix - Chapters 15, 38, 48, 49, 51 and 57.

3. Minnesota Plumbing Code Appendices A, C, D, and F.

4. Flood Proofing Regulations, Sections 201.2 through 208.2.

SBC 201 is deleted in its entirety and the following inserted in lieu thereof:

(Strikeouts and underlining represents alterations to the 1973 UBC only)

SBC 201 Adoption of UBC by Reference. Chapters 2 through 60 and appendix of the 1973 Edition of the Uniform Building Code, hereinafter "UBC," as promulgated by the International Conference of Building Officials, is incorporated by reference and hereby made part of the State Building Code. Said UBC shall constitute chapters 4 through 70 (SBC 401 through 7001) of the State Building Code and shall be subject to the following alterations and amendments:

1. Chapter 2 "Organization and Enforcement" of the UBC shall be placed in the appendix of this Code and may be adopted by municipalities, provided, however, that when or where a Board of Appeals is created by a municipality, pursuant to Chapter 2 of the UBC, all decisions or findings by such board shall be reported to the State Building Inspector within fifteen (15) days of such decision or finding.

2. Chapter 3 "Permits and Inspections" of the UBC shall placed in the appendix of this Code and may be adopted by municipalities. When permits are required or issued by municipalities for any construction covered by this Code, inspection as set forth in Sec. 304(d) of the UBC shall be performed for construction regulated by said code, and inspections shall be performed for all permits issued or required for other work or construction regulated by this as are necessary to ensure compliance with the Code.

3. Chapter 5 of the UBC is amended by adding a new section to read as follows:

512. Roof Access. Unless specifically exempted by the Building official due to space limitations, roof height above grade or other special considerations, buildings on which any heating, air conditioning, or refrigeration equipment is hereafter installed on the roof and which equipment will require periodic inspection, service and maintenance in accordance with the mechanical code - SBC 7101 through SBC 8810 shall 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 shall be provided to make such equipment safely accessible. Said stair leading to the scuttle or bulkhead shall 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 shall be more than nine inches and handrails shall be provided on both sides of the access stairs. The minimum opening of the scuttle or bulkhead shall be not less than nine square feet in area with the minimum dimension being not less than two feet. In no case shall this required access be located in or pass through the elevator shaft or elevator machine room.

Equipment should be located with at least six feet of clearance from the edge of the roof or similar hazards. If the clearance is less than six feet, a suitable rail or guard not less than forty-two inches in height shall be provided.

Each unit of equipment shall have an accessible dis-connect switch. A 20 ampere 110-120 volt AC ground type convenience outlet shall be installed on the roof adjacent to the unit or equipment. The circuit for this convenience outlet shall have approved ground-fault circuit protection and shall not be connected to the equipment circuit.

4. Table 5-A, D.2, of the UBC is amended to read as follows:

D.2 Nurseries for full-time care of children under kindergarten age. Hospitals, sanitariums, sanatoriums, nursing homes with non-ambulatory patients, and similar buildings (each accommodating five or more ~~than five~~ persons.

5. Table 5-A, D.3, of the UBC is amended to read as follows:

D.3 Boarding care ~~Nursing~~ homes, residential care facilities for ambulatory ~~patients,~~ persons, homes for children of kindergarten age or over (each accommodating five or more ~~than five~~ persons).

6. Section 802(c) of the UBC is amended to read as follows:

(c) Special Provisions. Rooms in Divisions 1 and 2 Occupancies used for day care purposes, kindergarten, ~~first or second grade~~ pupils and Division 3 Occupancies shall not be located above the first story.

Storage and janitor closets shall be of one-hour fire-resistive construction. Stages and enclosed platforms shall be constructed in accordance with Chapter 39. For attic space partitions and draft stops, see Section 3205.

7. Section 810 of the UBC is amended as follows:

Sec. 810. Approved fire alarms shall be provided for all Division 1 and 2 Group C Occupancies with an occupant load of more than 50 persons and in Division 3 Group C Occupancies with an occupant load of more than 29 persons. In every Group C Occupancy provided with an automatic fire-extinguishing or detection system, the operation of such system shall automatically activate the school fire alarm system. ~~which shall include an alarm mounted on the exterior of the building.~~

The fire alarm system shall be installed in compliance with NFPA Standard 72-A-~~67~~ 72, "Local Protective Signaling Systems."

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

1. A complete non-coded continuously sounding until manually reset, electrically supervised type.

2. Shall have sounding stations on 100 foot to 150 foot spacing; (a) in corridors, (b) in areas of high noise levels, such as band rooms, shops, boiler rooms, (c) a weatherproof station on exterior of the building facing residential areas.

3. Shall have automatic sending stations (detectors) in boiler rooms, kitchens, shops, painting areas, lounges, laundries, janitors' closets, storerooms, etc., or unsupervised and unoccupied spaces, namely critical or hazardous areas.

4. Manual sending stations shall be provided in the natural path of escape from fire, near each exit from an area, on each floor, and shall be readily accessible, unobstructed and at visible locations.

8. Section 901 of the UBC is amended to read as follows:

Division 2. ~~Nurseries for the full time care of children under the age of six (each accommodating more than five persons).~~

~~Hospitals, sanitariums, nursing homes with nonambulatory patients and similar buildings (each accommodating more than five persons).~~

Hospitals, sanitariums, sanatoriums, nursing homes and similar buildings, nurseries for full time care of children under kindergarten age (each accommodating five (5) or more persons).

Division 3. ~~Nursing homes for ambulatory patients, homes for children six years of age or over (each accommodating more than five persons).~~

Boarding care homes, residential care facilities for ambulatory persons, homes for children of kindergarten age or over, (each accommodating five (5) or more persons). Residential care facilities for ambulatory persons shall include but not be limited to facilities for the treatment of alcoholism or drug dependency, for retarted children and adults, and child care institutions.

For occupancy separations see Table No. 5-B.

For occupant load see Section 3301.

EXCEPTION: Group D Occupancies shall not include buildings used only for private residential purposes or for a family group.

9. Section 902(b) of the UBC is amended to read as follows: :

(b) Special Provisions. Division 1 Occupancies shall be housed in buildings of Type I or Type II construction.

~~EXCEPTION:--One-story-buildings-of-Type-III-one-hour,-IV-one hour-or-V-one-hour-construction-may-be-permitted-provided-the-floor area-does-not-exceed-3900-square-feet-between-separation-walls-of two-hour-fire-resistive-construction-with-openings-protected-by fire-assemblies-having-one-and-one-half-hour-fire-protection-rating. See-Subsection-3318(g)-for-limitation-on-locking-devices.~~

Every story of a Group D, Division 2 Occupancy accommodating more than five nonambulatory persons, unless provided with a horizontal exit, shall be divided into not less than two compartments accommodating approximately the same number of nonambulatory persons in each compartment by a smokestop partition meeting the requirements of a one-hour occupancy separation so as to provide an area of refuge within the building. Corridor openings in the smokestop partition shall be protected with doors as required in Section 3304(h). Other openings shall be 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.

Rooms occupied by inmates or patients whose personal liberties are restrained, shall have noncombustible floor surfaces. For attic space partitions and draft stops, see Section 3205.

10. Section 905 of the UBC is amended to read as follows:

All portions of Group D Occupancies customarily used by human beings shall be provided with light and ventilation by means of windows or skylights with an area equal to one-eighth of the total floor area, one-half of which shall be openable, or shall be provided with artificial light and a mechanically operated ventilating system as specified in Section 605 and SBC 7720.

For other requirements on water closets, see Section 1711.

11. Section 909 of the UBC is amended to read as follows:

An approved fire alarm system shall be provided for all Group D Occupancies.

Audible alarm devices shall be used in all non-patient areas. Visible alarm devices may be used in lieu of audible devices in patient occupied areas. An approved alarm system shall comply with Section 810.

12. Section 1307(a) of the UBC is amended to read as follows:

Sec. 1307(a). Ceiling Heights. Habitable rooms~~, storage rooms and laundry rooms~~ shall have a ceiling height of not less than 7 feet 6 inches. Hallways, corridors, bathrooms, storage rooms, laundry rooms and water closet rooms shall have a ceiling height of not less than 7 feet measured to the lowest projection of the ceiling.

If any room in a building immediately below a sloped roof has a sloping ceiling, caused by the slope of the roof, the prescribed ceiling height for the room is required in only one-half the area thereof. No portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.

If any room has a furred ceiling, the prescribed ceiling height is required in two-thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet.

Any portion of a garage shall have an unobstructed headroom clearance of not less than 6 feet 6 inches above the finish floor to any ceiling, beam, pipe, or similar construction except for wall-mounted shelves, storage surfaces, racks, or cabinets.

13. Chapter 13 of the UBC is amended by adding a new section to read as follows:

Sec. 1314. Sound Transmission Control.

Sound transmission control shall be provided to meet the standards defined in UBC Appendix Chapter 35.

14. Chapter 13 of the UBC is amended by adding a new section to read as follows:

Sec. 1315. Deadbolt Locks Required. All exit doors leading to public areas from all dwelling units and hotel units shall be provided with deadbolt locks, at least one of which must be capable of being locked from the exterior of said 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.

Deadbolt locks having a bolt moved by turning a key shall be of the five-pin tumbler type or an approved equivalent. Lock throw shall be not less than three-quarters inch (3/4"). Locks shall meet the requirements of UBC, Sec. 3303(c).

15. Section 1407(a) of the UBC is amended to read as follows:

Sec. 1407(a). Ceiling Heights. Habitable rooms, storage rooms and laundry rooms shall have a ceiling height of not less than 7 feet 6 inches. Hallways, corridors, bathrooms, storage rooms, laundry rooms and water closet rooms shall have a ceiling height of not less than 7 feet measured to the lowest projection of the ceiling.

If any room in a building immediately below a sloped roof has a sloping ceiling caused by the slope of the roof, the prescribed ceiling height for the room is required in only one-half the area thereof. No portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.

If any room has a furred ceiling, the prescribed ceiling height is required in two-thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet.

16. Chapter 14 of the UBC is amended by adding a new section to read as follows:

Sec. 1414. Sound Transmission Control.

Sound transmission control shall be provided to meet the standards defined in UBC Appendix Chapter 35.

17. Section 1503 of the UBC is amended to read as follows:

Sec. 1503. For fire-resistive protection of exterior walls and openings, as determined by location on property, see Section 504 and Part V.

EXCEPTION: Detached private garages located in Fire Zone No. 3 are not required to meet the Fire Resistance of Exterior Walls provided for in Table No. 5-A.

18. Section 1706(d) of the UBC is deleted.

~~(d)--Elevator-Shafts.--Shafts-housing-elevators-and-extending through-more-than-two-stories-shall-be-vented-to-the-outside.--The area-of-vents-shall-be-not-less-than-3½-percent-of-the-area-of-the elevator-shaft,-with-a-minimum-of-3-square-feet-per-elevator.~~

19. Section 1716 of the UBC is amended to read as follows:

Sec. 1716. All unenclosed floor and roof openings; open and glazed sides of landings; balconies or porches which are more than 30 inches above grade; and roofs used for other than service of the building, shall be protected by a guardrail. Guardrails shall be not less than 42 inches in height. Open guardrails and stair railings shall have intermediate rails or an ornamental pattern such that no object 9 inches in diameter can pass through. The height of stair railings may be as specified in Section 3305(i).

EXCEPTION: 1. Guardrails need not be provided on the loading side of loading docks.

2. In Group I Occupancies guardrails shall be not less than 36 inches in height.

20. Section 2305 of the UBC is amended to read as follows:

(c) Snow Loads. Snow loads full or unbalanced shall be considered, ~~in-place-of-loads-set-forth-in-Table-No.-23B,~~ 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, St. Louis, Scott and Washington. A basic snow load of 30 lbs. per square foot of horizontal projection is required for all other counties not mentioned above.

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 Appendix C.

Snow loads in excess of 20 pounds per square foot may be reduced for each degree of pitch over 20 degrees by R_S as determined by the following formula:

$$R_S = \frac{S}{40} - \frac{1}{2}$$

WHERE:

R_S = Snow load reduction in pounds per square foot per degree of pitch over 20°.

S = Total snow load in pounds per square foot.

21. Section 2314(a) of the UBC is amended to read as follows:

(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 foundation. The force shall be assumed to come from any horizontal direction.

The provisions of this Section apply to the structure as a unit and also to all parts thereof, including the structural frame or walls, floor and roof systems, and other structural features.

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

(a) General. Footings and foundations, unless otherwise specifically provided, shall be constructed of masonry or concrete and in all cases extend below the frost line. Footings shall be constructed of solid masonry or concrete. Foundations supporting wood shall extend at least 6 inches above the adjacent finish grade. Footings shall have a minimum depth below finished grade as indicated in Table No. 29-A unless another depth is recommended by a foundation investigation.

In the absence of a determination by an engineer competent in soil mechanics, the minimum allowable footing depth in feet due to freezing shall be five (5) feet in Zone I and three and one-half (3 1/2) feet in Zone II.

ZONE I - SHALL INCLUDE 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, MAHNOMEN, MARSHALL, MILLE LACS, MORRISON, NORMAN, OTTERTAIL, PENNINGTON, PINE, POLK, RED LAKE, ROSEAU, ST. LOUIS, TODD, TRAVERSE, WADENA, 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, WANTONWAN, WINONA, WRIGHT, YELLOW MEDICINE.

When the soil, natural or fill, is sand or pit run sand and gravel, and of a depth in accordance with minimum footing depth requirements for each zone, slab on grade construction which supports roof and wall loads shall be permitted.

EXCEPTIONS:

1. Group J-1 Occupancy.

2. Lesser depths may be permitted when supporting evidence is presented by an engineer competent in soil mechanics.

23. Section 2908(b) of the UBC is amended to read as follows:

(b) Determination of Allowable Loads. The allowable axial and lateral loads on piles shall be determined by an approved formula by load tests or by ~~a foundation investigation.~~ soil support characteristics considering the physical properties of the piles used (see Section 2909). A foundation investigation shall be made by an engineer competent in soil mechanics when cast in place piles are used and when otherwise required by the Building Official.

Caissons when constructed for the support of structures shall be designed in accordance with accepted engineering practice. A foundation investigation shall be made by an engineer competent in soil mechanics, when required.

24. Section 3301(c) of the UBC is amended by adding the following definition after the definition of Exit Passageway and before the definition of Horizontal Exit:

HIGH HAZARD BUILDING is a Group E, Division 1 and 2 Occupancy consisting of a building or buildings which are used for the storage, manufacture or processing of highly combustible or explosive products or materials which are likely to burn with extreme rapidity or which may produce poisonous fumes or explosions; for storage or manufacturing which involves highly corrosive toxic or noxious alkalies, acids or other liquids or chemicals producing flame, fumes, explosives, poisonous irritant or corrosive gases; and for the storage or processing of any materials producing explosive mixtures of dust or which result in the division of matter into fine particles subject to spontaneous ignition.

25. Section 3304 of the UBC is amended to read as follows:

(h) Openings. Where corridor walls are required to be of one-hour fire-resistive construction by Subsection (g) above, every door opening shall be protected by a tight-fitting smoke barrier and fire assembly having a fire protection rating of not less than 20 minutes when tested in accordance with U.B.C. Standard No. 43-2 without the hose stream test. Doors shall be maintained self-closing or shall be automatic closing in accordance with Section 4306(b)2. Glazed openings of the size and construction permitted for three-fourths-hour fire door assemblies and construction permitted for three-fourths-hour fire door assemblies in Section 4306(f) may be installed in such doors. Other interior openings shall be protected by approved ¼-inch thick wired glass set in steel frames. The total area of all openings, other than doors, in any portion of an interior corridor shall not exceed 25 percent of the area of the corridor wall of the room which it is separating from the corridor.

EXCEPTION:

1. Protection of openings in the interior walls of exterior exit balconies is not required.

2. In Type I and II buildings housing Group F-2 Occupancies, corridor walls may be of approved wire glass set in metal frames. The glass height shall not exceed two thirds (2/3) of the width of the corridor. A draft curtain of as least one hour fire-resistive construction and not less than 24 inches in height shall be provided to protect the corridor from the Group F-2 Occupancy area (tenant space). The draft curtain shall be located above the glass and extend a minimum of 24" below any finished ceiling in the tenant space. If the finished ceiling is not a fire-rated assembly, the draft curtain shall extend from the wire glass to a rated ceiling or floor assembly. When the F-2 Occupancy area (tenant space) is protected by an approved automatic fire-extinguishing system for a distance of twelve (12) feet in depth adjoining the corridor, and the corridor is not less than twelve (12) feet in width, glass other than wire 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 twelve (12) feet in width, when the entire story is protected by an approved fire-extinguishing system.

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

26. Section 3305 of the UBC is amended by adding a new subsection to read as follows:

(p) Scissors-type Stairs. When approved by the Building Official, scissor type stairs may be installed in Type I, Group H buildings when such stairs meet the following design standards: No guest room or dwelling unit door shall be more than 40' distant from a vertical exit door measured along a route of travel. Vertical exit doors must be separated by a distance not less than 15 feet, measured in a straight line. When two exit stairs are contained within the same vertical opening, each stair shall be separated from the other by an assembly of materials having a two-hour fire-resistive rating.

27. Section 3307(b) of the UBC is amended to read as follows:

(b) Openings. All openings in a wall which provides a horizontal exit shall be protected by a fire assembly having a fire-resistance rating of not less than one and one-half hours. Such fire assembly shall be maintained self-closing or shall be automatic closing by means of products of combustion detectors other than heat as provided in Section 4306(b)2.

28. Section 3312(b) of the UBC is amended to read as follows:

(b) Exit Signs. At every required exit doorway, and wherever otherwise required to clearly indicate the direction of egress, an exit sign with letters at least ~~5~~ 6 inches high shall be provided from all areas serving the occupant load specified in this Subsection. In interior stairways the floor level leading direct to the exterior shall be clearly indicated.

Group A Occupancies and Groups B, D and H Occupancies with an occupant load of more than 50.

All other occupancies serving an occupant load of more than 100.

EXCEPTION: Main exterior exit doors which obviously and clearly are identifiable as exits need not be sign posted when approved by the Building Official.

29. Section 3318(c) of the UBC is amended to read as follows:

(c) Corridors. The minimum clear width of a corridor shall be 44 inches, except that corridors serving any area housing one or more non-ambulatory persons shall be not less than eight feet (8') in width. There shall be no change of elevation in a corridor serving non-ambulatory persons unless ramps are used. Boarding care homes and other institutions for residential and ambulatory care shall have a minimum corridor width of six feet (6').

In Group D-1 Occupancies such as jails, prisons, reformatories and similar buildings with open barred cells forming corridor walls, the corridors and cell doors need not be fire-resistive.

30. Section 3801(c) of the UBC is amended by adding a new definition after the definition of Fire Department Hose Connection and before the definition of Wet Standpipe:

FIRE DEPARTMENT STANDPIPE is a fire line system with a constant water supply and pressure and equipped with Fire Department inlet and outlet connections and installed exclusively for the use of the Fire Department.

31. Section 3802 of the UBC is amended by adding a new subsection to read as follows:

(d) SPECIAL AUTOMATIC FIRE-EXTINGUISHING SYSTEMS. In all Occupancies having commercial cooking equipment (see NFPA No. 96A, 1971), automatic fire extinguishing systems complying with UBC Standard 38-1 or 38-2 shall be installed for protection of duct systems, grease removal devices, hoods and over commercial cooking equipment which may be a source of ignition (such as fat fryers, ranges, griddles and broilers). Systems installed in accordance with the following standards are also permitted:

1. Standard for foam-water sprinkler systems and foam-spray systems, NFPA No. 16.

2. Standard for dry-chemical extinguishing system, NFPA No. 17.

EXCEPTION: These requirements shall not apply to Group I Occupancies.

32. Section 3803 of the UBC is amended to read as follows:

~~Dry~~ Fire Department Standpipes

Sec. 3803(a) General. ~~Dry~~ Fire Department Standpipes shall comply with the requirements of this Section and NFPA 14-71.

(b) Where required. All buildings ~~four,~~ three or more stories in height, shall be equipped with one or more ~~dry~~ Fire Department Standpipes.

(c) Location. There shall be one ~~dry~~ Fire Department Standpipe outlet connection located at every floor level landing above the first floor of every required enclosed stairway or smokeproof enclosure. Outlets at enclosed stairways shall be located within the enclosure. No point within a building requiring ~~dry~~ Fire Department Standpipes shall be more than 130 feet travel distance from a ~~dry~~ Fire Department Standpipe outlet connection.

Portions of ~~dry~~ Fire Department Standpipe systems not located within an enclosed stairway or smokeproof enclosure shall be protected by a degree of fire resistance equal to that required for vertical enclosures in the building in which they are located.

(d) Detailed Requirements. 1. Construction. ~~Dry standpipes shall be wrought iron or galvanized steel and, together with~~ Fittings and connections shall be of sufficient strength to withstand 300 pounds per square inch of water pressure when ready for service. All ~~dry~~ Fire Department Standpipes shall be tested hydrostatically to withstand not less than ~~200~~ 300 pounds per square inch of pressure for two hours, but in no case shall the pressure be less than 50 pounds per square inch above the maximum working pressure.

2. Piping. All horizontal runs of ~~dry~~ Fire Department Standpipe systems shall be pitched at the rate of 1/4 inch to 10 feet for purposes of draining.

Where pipe traps occur in such standpipe systems including fire department connections, they shall be provided with drains.

3. Size. The size of the standpipe shall be not less than 4 inches in buildings in which the highest outlet is 75 feet or less above the fire department connection and shall be not less than 6 inches where the highest outlet is higher than ~~74~~ 75 feet above the fire department connection.

4. ~~Dry~~ Fire Department connections. All 4-inch ~~Dry~~ Fire Department Standpipes shall be equipped with a two-way fire department connection. All 6-inch ~~dry~~ Fire Department Standpipes shall be equipped with a four-way fire department connection. ~~The~~ All fire department connections shall be located on a street front, not less than 18 inches nor more than 4 feet above grade and shall be equipped with an approved straightway check valve and substantial plugs or caps. ~~The~~ All fire department connections shall be protected against mechanical injury and shall be visible and accessible. ~~Unless-otherwise-approved-no~~ More than one fire department connection ~~shall~~ may be required.

5. Outlets. Each standpipe shall be equipped with an approved 2 1/2 inch Outlet not less than 2 feet nor more than 4 feet above the floor level of each story. All ~~dry~~ Fire Department Standpipes shall be equipped with a two-way, 2 1/2 inch outlet above the roof line of the building when the roof has a pitch of less than 4 inches in 12 inches. All outlets shall be installed so that a 12 inch long wrench may be used in connecting the hose with clearance for the wrench on all sides of the outlet. Standpipes located in smokeproof enclosures shall have outlets located in the vestibule or on the balcony. Standpipe outlets in stairway enclosures or smoke towers shall be so located that the exit doors do not interfere with the use of the outlet. All outlets shall be equipped with an approved valve, cap and chains.

6. Signs. An approved, durable sign with raised letters of at least 1 inch in height shall be permanently attached adjacent to all fire department street connections. Such sign shall read, ~~dry~~ "Fire Department Standpipe."

7. Water Supply. The standpipe system shall deliver a water supply as required by Chapter 5, Water Supplies, N.F.P.A. No. 14-1970.

33. Section 3804(b) of the UBC is amended to read as follows:

(b) Where Required. Wet Standpipes extending from the cellar or basement into the topmost story shall be provided in Groups A and B, Division 1 and 2 Occupancies with an occupant load exceeding 1000; in Groups ~~G,~~ D, E, F, and G H Occupancies ~~four~~ three or more stories in height; and in Groups E and F Occupancies having a floor area exceeding 20,000 square feet per floor.

EXCEPTIONS:

1. Wet Standpipes are not required in buildings equipped throughout with an automatic fire-extinguishing system.

2. Wet standpipes are not required in basements or cellars equipped with a complete automatic fire-extinguishing system.

3. Wet Standpipes shall not be required in assembly areas used solely for worship.

34. Section 4701(a) of the UBC is amended to read as follows:

(a) General. The installation of lath, plaster and gypsum wallboard shall be done in a manner and with materials as specified in this Chapter, or as set forth in ANSI A42, 2, 1971 Specifications for Portland Cement and Portland Cement-Lime Plastering, Exterior (Stucco) and Interior and ANSI A 42, 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 shall comply 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.

35. Sections 5001 through 5006 of the UBC are deleted and replaced by SBC 301 through 337.

36. Section 5101 through 5104 of the UBC are deleted.

37. UBC Appendix - the following Chapters are Mandatory:

13. 23. 35. 70.

SBC 202 Mechanical Code. All references in the Uniform Building Code, ~~Volume I,~~ to the Uniform ~~Building~~ Mechanical Code, ~~Volume II, Mechanical~~ shall be referred to and regulated by ~~the applicable mechanical code of the State.~~ Minnesota Heating Ventilating, Air Conditioning and Regrigeration Code.

SBC 203 Adoption of FLOOD PROOFING REGULATIONS BY REFERENCE.

Flood-Proofing Regulations, as promulgated by the Office of the Chief of Engineers, U.S. Army, June, 1972, is hereby adopted by reference and made a part of the State Building Code, subject to the following amendments:

(Sections 201.2 through 208.2 are placed in the appendix of this Code.)

1. Section 200.2 is amended to read as follows:

Sec. 200.2 OFFICIAL FLOOD PLAIN ZONING MAP: The Official Flood Plain Zoning Map showing the extent and boundaries of the Primary and Secondary Flood Hazard Areas is hereby declared and established as a part of these Regulations. "Hereinafter reference to the term Primary Flood Hazard Areas" in these regulations shall be synonymous with the term "flood plain areas" as used in Minnesota Regulations NR 85-93.

2. Section 200.3 is amended to read as follows:

Sec. 200.3 REGULATORY FLOOD DATUM: For the purpose of these Regulations, the Regulatory Flood Datum, or as hereinafter referred to as the "RFD", is hereby declared and established for use as the reference datum for determining the elevation above mean sea level to which flood-proofing protection shall be provided. Hereinafter reference to the term "Regulatory Flood Datum" in these regulations shall be synonymous with the term "flood protection elevation" as used in Minnesota Regulations NR 85-93.

3. Section 201.1 is amended to read as follows:

Sec. 201.1 APPLICATION: These Regulations shall apply to the construction, alteration, and repair of any building or parts of a building or structure in the Flood Hazard Area(s) of the municipalities. Additions, alterations, repairs, and changes of use or occupancy shall comply with all provisions for new buildings and structures as otherwise required in "The Building Code," except as specifically provided in these Regulations.

4. Section 201.2 is amended to read as follows:

Sec. 201.2 NONCONFORMING USE: A structure or the use of a structure or premises which was lawful before the passage or amendment of the ordinance but which is not in conformity with the provisions of these Regulations may be continued subject to the following conditions:

(1) No such use shall be expanded, changed, enlarged or altered in a way which increases its nonconformity.

(2) No structural alteration, addition, or repair to any conforming structure over the life of the structure shall exceed 50 per cent of its value at the time of its becoming a nonconforming use, unless the structure is permanently changed to a conforming use.

(3) If such use is discontinued for 12 consecutive months, any future use of the building premises shall conform to these Regulations. The assessor shall notify the zoning administrator in writing of instances of nonconforming uses which have been discontinued for a period of 12 months.

(4) If any nonconforming use or structure is destroyed by any means, including floods, to an extent of 50 per cent or more of its assessed value it shall not be reconstructed except in conformance with the provisions of these Regulations; provided, the Board of Adjustment may permit reconstruction if the use or structure is located outside the floodway and is adequately and safely flood-proofed, elevated, or otherwise protected in conformance with these Regulations.

(5) Uses or adjuncts thereof which are or become nuisances shall not be entitled to continue as nonconforming uses.

(6) Except as provided in "The Building Code," any use which has been permitted as a special exception shall not be deemed a nonconforming use but shall be considered a conforming use.

(7) Any alteration, addition, or repair to any nonconforming structure which would result in substantially increasing its flood damage or flood hazard potential shall be protected as required by these Regulations.

(8) The Building Official shall maintain a list of nonconforming uses including the date of becoming nonconforming, assessed value at the time of its becoming a nonconforming use, and the nature and extent of nonconformity. This list shall be brought up-to-date annually.

(9) The Building Official shall prepare a list of those nonconforming uses which have been flood-proofed or otherwise protected in conformance with these Regulations. He shall present such list to the Board of Adjustment which may issue a certificate to the owner stating that such uses, as a result of these corrective measures, are in conformance with these Regulations.

5. Section 203.3 is amended to read as follows:

Sec. 203.3 RECORDS: Copies of such tests reports, certifications, or the results of such tests shall be kept on file in the office of the Building Official for a period of not less than 2 years after the approval and acceptance of the completed structure for beneficial occupancy.

6. Section 204.6 is amended to read as follows:

Sec. 204.6 BOARD OF APPEALS: In order to determine the suitability of alternate materials and methods of construction and to provide reasonable interpretations of the provisions herein, there shall be and is hereby created a Board of Appeals of 5 members. Each member of the Board shall be a licensed professional architect or engineer, or a builder or superintendent of building construction, with at least ten years experience, for five years of which he shall have been in responsible charge of work. At no time shall there be more than two members from the same profession. At least one of the members shall be a licensed structural or civil engineer with architectural engineering experience. The Board shall adopt reasonable rules for its investigations and shall render written decisions to the Building Official.

7. Section 204.7 is amended to read as follows:

Sec. 204.7 VALIDITY: It shall be unlawful for any person, firm or corporation or agency (State or local) to erect, construct, enlarge, alter, repair, move, improve, remove, convert, or demolish, any building or structure in the Flood Hazard Area(s), or cause the same to be done, contrary to or in violation of any of the provisions of these Regulations and/or "The Building Code."

8. Section 205.1 is amended to read as follows:

Sec. 205.1 STATEMENT OF INTENTION TO IMPROVE: The Owner or any registered architect or licensed professional engineer authorized to represent the Owner shall, before preparing final plans for any improvement in the ~~Primary~~ Flood Hazard Area(s), file with the Building Official a Statement of Intention to Improve, including a brief description of the type of improvement being considered and giving its precise location, on a form provided by the Building Official. The Building Official shall note on two copies the elevation of the RFD at the location of the proposed improvement. One copy of the Statement of Intention to Improve shall be retained by the Building Official until a permit for improvement on the site is approved or one year has elapsed; a second copy shall be returned to the Owner for his use in final siting and design of his improvement. Assignments of the RFD elevations at all locations shall be made from profiles and/or cross sections provided by the (Army Corps of Engineers, SCS, USGS). This information shall be open to public examination at all reasonable times.

9. Section 205.2 is amended to read as follows:

Sec. 205.2 PERMITS REQUIRED: No person, firm or corporation shall erect, construct, enlarge, alter, repair, move, remove, convert, or demolish any building or structure or any part thereof, or make any other improvement within the ~~Primary~~ Flood Hazard Area(s), or cause same to be done, without first obtaining a separate building flood proofing permit for any such improvement from the Building Official. Ordinary minor repairs may be made with the approval of the Building Official without a permit, provided that such repairs shall not violate any provision of these Regulations or of "The Building Code."

10. Section 205.3 (2) is amended to read as follows:

(2) 2 sets of complete plans and specifications, in addition to plans and specifications required by "The Building Code", except that plans and specifications for any and all proposed improvements in the ~~Primary~~ Flood Hazard Area(s) shall be prepared by an engineer or architect licensed by the State to practice as such. All drawings and specifications shall bear the name of the author thereof in his true name, followed by such title as he may be lawfully authorized to use. All plans and sections shall be noted with the proposed flood-proofing class of each space below the RFD including detail drawings of walls and wall openings.

11. Section 205.3 (3) is amended to read as follows:

(3) 2 copies of the Owner's Contingency Plan, which shall describe in detail all procedures for temporary placement and removal or contingent protection proposed for items in spaces affected by these Regulations including:

(a) Plans and schedules for items to be removed and locations of places above the RFD to which they will be removed if these contents violate restrictions associated with the flood-proofing class of the space in which they are placed temporarily, including specific organizational responsibilities for accomplishing this removal.

(b) Procedures, materials and equipment for protecting items required to have protection by their flood-proofing class but for which this protection is proposed to be provided contingently, including specific organizational responsibilities for accomplishing this protection.

Waivers of restrictions implicitly requested by submission of the Owner's Contingency Plan may be granted by the Building Official as provided by 1101.2.

12. Section 209.1 is amended to read as follows:

Sec. 209.1 NEW BUILDING AND STRUCTURES: Every building or structure hereafter erected, that is located in the ~~Primary~~ Flood Hazard Area(s) where the ground surface is 2 feet or more below the RFD, or where flood water velocities may exceed

five (5) feet per second, shall be provided with an inclosed refuge space above the RFD of sufficient area to provide for the occupancy load with a minimum of 12 square feet per person. It shall be provided with one or more exits through the exterior walls above the RFD to an exterior platform and stairway not less than three (3) feet wide.

13. Section 209.3 is amended to read as follows:

Sec. 209.3 USE OF SPACE BELOW THE REGULATORY FLOOD DATUM; No ~~flood~~ floor level or portion of the building or structure that is below the RFD regardless of structure or space classification shall be used for human occupancy, or for storage of any property, materials, or equipment that might constitute a safety hazard when contacted by flood waters.

14. Section 210.7 is amended to read as follows:

Sec. 210.7 PLACARD TYPES: Placards shall be white rigid plastic or other non-water susceptible material, 8 inches long and 12 inches wide, and shall have printed thereon in black letters the information shown in Figure 2.

15. Section 300.0 is amended by adding a subsection to read as follows:

Sec. 300.2 INTERPRETATION: For the purpose of these regulations, where definition of terms as set forth in this Chapter conflict in meaning with those as set forth in Minn. Regs. NR 85(c), the latter shall take precedence.

16. Section 301.2.9 is amended to read as follows:

Sec. 301.2.9 HABITABLE ROOM - a space used for living, sleeping, eating or cooking, or combination thereof, but not including bathrooms, toilet compartments, closets, halls, storage rooms, laundry and utility rooms, ~~basement recreation rooms~~ cellars, and similar spaces.

17. Section 301.4.1 is amended to read as follows:

Sec. 301.4.1 BUILDING CODE - ~~the regulations adopted by a local governing body~~ The State Building Code setting forth standards for the construction, addition, modification and repair of buildings and other structures for the purpose of protecting the health, safety, and general welfare of the public.

18. Section 402.1 (Table 2) is amended to read as follows:

Sec. 402.1 GENERAL: Table 2 indicates the various degrees of protection required to permit uses of spaces for each flood-proofing class. Although spaces must meet the requirements shown for each element of flood-proofing, the chart in itself shall not be construed as being exhaustive with respect to all requirements imposed by these Regulations. In disputes arising over the interpretation of this chart, the written provisions of these Regulations shall be considered as definitive.

Sec. 402.1 GENERAL: Table 2 indicates the various degrees of protection required to permit uses of spaces for each flood-proofing class. Although spaces must meet the requirements shown for each element of flood-proofing, the chart in itself shall not be construed as being exhaustive with respect to all requirements imposed by these Regulations. In disputes arising over the interpretation of this chart, the written provisions of these Regulations shall be considered as definitive.

Table 2

SPACE CLASSIFICATION CHART

FLOOD-PROOFING CLASSIFICATION OF SPACES									
	MINIMUM REQUIREMENTS								
Flood-Proofing Classes	Water-Proofing	Structural Loads	Closure of Openings	Internal Flooding & Drainage	Flooring	Walls and Ceilings	Contents	Electrical	Mechanical
W1 Completely Dry	Type A	Class 1	Type 1	See Chapter 8	Class 1	Class 1	Class 1	See Chapter 12	See Chapter 13
W2 Essentially Dry	Type B	Class 1	Type +2		Class 2	Class 2	Class 2		
W3 Flooded with Potable Water	Type A	Class 2	Type 3		Class 3	Class 3	Class 3		
W4 Flooded with Flood Water	Type C	Class 3	Type 4		Class 4	Class 4	Class 4		
W5 Non-Flood-Proofing	—	—	Type 5		Class 5	Class 5	Class 5		

19. Section 612.2.1 is amended to read as follows:

Sec. 612.2.1 NATURAL TERRAIN: In addition to the requirements of "The Building Code", the building shall be located not less than 15 feet back from the line of incidence of the RFD on the ground, foundation design shall take into consideration the effects of soil saturation on the performance of the foundation, the effects of flood waters on slope stability shall be investigated, normal access to the building shall be by direct connections with areas above the RFD and all utility service lines shall be designed and constructed as required to protect the building and/or its components from damage or failure during a flooding event to the RFD.

20. Section 612.2.2 is amended to read as follows:

Sec. 612.2.2 BUILDING ON FILL: The building and all parts thereof may be constructed above the RFD on an earth fill. Prior to placement of any fill or embankment materials, the area upon which fill is to be placed, including a five-foot strip measured horizontally beyond and contiguous to the toe line of the fill, shall be cleared of standing trees and snags, stumps, brush, down timber, logs and other growth, and all objects including structures on and above the ground surface or partially buried. The area shall be stripped of topsoil and all other material which is considered unsuitable by the Building Official as foundation material. All combustible and noncombustible materials and debris from the clearing, grubbing and stripping operations shall be removed from the proposed fill area and disposed of at locations above the RFD and/or in the manner approved by the Building Official. Fill material shall be of a selected type, preferable granular and free-graining, placed in compacted layers. Fill selection and placement shall recognize the effects of saturation from flood waters on slope stability, uniform and differential settlement, and scour potential. The minimum elevation of the top slope for the fill section shall be no more than one foot

below at the RFD. Minimum distance from any point of the building perimeter to the top of the fill slope shall be either ~~25~~ 15 feet or twice the depth of fill at that point, whichever is the greater distance. This requirement does not apply to roadways, driveways, playgrounds, and other related features which are not integral and functional parts of the building proper. Fill slopes for granular materials shall be no steeper than one vertical on one and one-half horizontal, unless substantiating data justifying steeper slopes are submitted to the Building Official and approved. For slopes exposed to flood velocities of less than five (5) feet per second, grass or vine cover, weeds, bushes and similar vegetation undergrowth will be considered to provide adequate scour protection. For higher velocities, stone or rock slope protection shall be provided.

21. Section 802.1 is amended to read as follows:

Sec. 802.1 APPLICABILITY: Spaces to be intentionally flooded with flood water (W4) shall be provided with the necessary equipment, devices, piping, controls, etc. necessary for automatic flooding during the flood event and drainage of the space(s) when flood waters recede. The automatic flooding and drainage system(s) shall utilize approved piping materials and have sufficient capacity for raising or lowering the internal water level at a rate comparable to the anticipated rate of rise and fall of a flood that would reach the RFD. These pipe systems shall be directly connected to the external flood waters to maintain a balanced internal and external water pressure condition. Provisions shall be made for filling the lower portions of the structure first and for interconnections through or around all floors and partitions to prevent unbalanced filling of chambers or parts within the structures. All spaces below the RFD, shall be provided with air vents extending to at least 3 feet above the elevation of the RFD to prevent the trapping of air by the rising water surface. All openings to the filling and drainage systems shall be protected by screens or grills to prevent the entry or nesting of rodents or birds in the system.

22. Section 1301.2.1 is amended to read as follows:

Sec. 1301.2.1 Heating systems utilizing gas or oil fired furnaces shall have a float operated automatic control valve installed in the fuel supply line which shall be set to operate when flood waters reach an elevation equal to the floor level of the space where furnace equipment is installed. A manually operated gate valve that can be operated from a location above the RFD shall be provided in the fuel supply line to serve as a supplementary safety provision for fuel cutoff. The heating

equipment and fuel storage tanks shall be mounted on and securely anchored to a foundation pad or pads of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. As an alternate means of protection, elevation of heating equipment and fuel storage tanks above the RFD on platforms or by suspension from overhead structural systems will be permitted. All unfired pressure vessels will be accorded similar treatment. Fuel lines shall be attached to furnaces by means of flexible or swing type couplings. All heating equipment and fuel storage tanks shall be vented to an elevation of at least 3 feet above the RFD. Air supply for combustion shall be furnished if required for systems installed in W1 or W2 spaces, and piping or duct work for such purpose shall be terminated at least 3 feet above the RFD.

23. Section 1302.2.2 is amended to read as follows:

Sec. 1302.2.2: Where the state of dryness of a space is dependent on a sump pump system, or where the stability of a structure during a flood event depends on the relief of up-lift pressures on building components, all interior storm water drainage or seepage, appliance drainage, and underslab drain tile systems shall be directly connected to a sump (pump) and discharged at an elevation at least 3 feet above the RFD.

24. Section 1302.2.3.1 is amended to read as follows:

Sec. 1302.2.3.1: All vents shall extend to an elevation of at least 3 feet above the RFD.

25. Section 1302.3 is amended to read as follows:

Sec. 1302.3 SEWAGE DISPOSAL/TREATMENT: Individual sewage disposal and/or treatment facilities~~,-except-for-cesspools-and seepage-pits,~~ will be permitted in a Flood Hazard Area but only at locations where connection with a public sewer system is not possible or feasible. ~~The-design-of-such-systems-shall-take-into consideration-their-location-with-respect-to-wells-or-other sources-of-water-supply,-topography,-water-table,-soil-characteristics,-available-area-for-improvements,-and-the-effects-of flooding-to-the-RFD~~. Such facilities shall conform to applicable standards, criteria, rules and regulations of the Minnesota Department of Health and Pollution Control Agency in terms of size,construction, use and maintenance and with standards and criteria of the Minnesota Department of Natural Resources regarding setbacks from the normal high water mark of a watercourse in accordance with the public water classification.

Installations in low swampy areas or areas ~~with generally high water tables~~ where the highest known ground water table is within four feet of the bottom of the soil absorption system or which may be subject to ~~periodic~~ recurrent flooding will not be permitted.

26. Section 1302.3.1 is deleted.

~~Sec. 1302.3.1: Cesspools will not be permitted as permanent installations for sewage disposal, except that in those instances where connection to a public sewer system will be possible within a one (1) year period shall expire on the anniversary date of the written approval of the Building Official. Because of the public health hazard involved, extreme care shall be exercised in locating the cesspool. Under no circumstances shall a cesspool be located closer than 150 feet to a water supply well or be permitted to penetrate the ground water stratum.~~

27. Section 1302.3.2 is deleted.

~~Sec. 1302.3.2: Seepage pits shall, for purposes of these Regulations, conform to the same requirements set forth above for cesspools.~~

28. Section 1302.4.1 is amanded to read as follows:

Sec. 1302.4.1: Water supply wells, tanks, filters, softeners, heaters, and all appliances located below the RFD shall be protected against contamination by covers, walls, copings, or castings. All vents shall be extended to a minimum elevation of 3 feet above the RFD.

SBC ~~203~~ 204 through SBC 299 is reserved for future use.

PROPOSED AMENDMENTS TO

MINNESOTA STATE BUILDING CODE

SBC 8801 THROUGH SBC 8810

ELEVATORS, DUMBWAITERS, ESCALATORS, MANLIFTS MOVING WALKS, HOISTS AND LIFTS

NOTE: The present wording is shown with a line drawin through the words that are to be deleted and the proposed new wording is underlined.

SBC 8801 ELEVATORS, DUMBWAITERS, ESCALATORS, MANLIFTS, MOVING WALKS, HOISTS AND LIFTS. General. Elevators, dumbwaiters, escalators, manlifts, moving walks, hoists and lifts shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property.

SBC 8802 Definitions. For the purpose of this chapter, the terms or words listed below shall have the meaning indicated:

EXISTING INSTALLATION. Shall mean an installation on which the construction or installation was begun prior to the effective date of this code.

NEW INSTALLATION. Shall mean an installation on which the construction or installation was begun subsequent to the effective date of this code.

SBC 8803 Existing Installations.

~~(1)~~ 1. All existing installations may be continued in service as long as they are properly maintained and are, in the opinion of the administrative authority, installed and maintained in a safe condition. The Administrative Authority may order the installation of car gates, car tops, and the car walls extended to the car top on all existing installations. The administrative authority shall have the authority to shut down any piece of equipment covered by this chapter, which in his opinion is dangerous to life, limb and adjoining property, and such equipment shall not be put back into operation until such unsafe condition has been corrected and approved by the Administrative Authority.

~~(2)~~ 2. Any installation which is materially changed subsequent to the date of enactment of this code shall comply with all of the requirements covering a new installation.

A material change shall be defined as any change which moves the location, increases or decreases the length of travel, changes the type of operation, increases the speed or carrying capacity or changes the types of power supply of an existing installation.

Any installation, whether new or existing, which shall become damaged, defective or worn by fire or other causes including ordinary wear to such an extent that, in the opinion of the administrative authority it becomes dangerous to life, limb and adjoining property, such installations shall be repaired or rebuilt in conformity with the provisions of this chapter for new installations. Such equipment shall, if in the opinion of the administrative authority, it is found necessary to protect life, limb and property, be taken out of service until such unsafe condition has been removed.

SBC 8804 Inspections, Tests and Approval.

~~(1)~~ 1. Approval of Plans. Any person, firm or corporation desiring to install, relocate, alter materially or extend any installation covered by this chapter shall be required to obtain approval for so doing from the administrative authority. Two sets of drawings and specifications showing such installation, relocation, alteration or extension shall be submitted for approval.

~~(2)~~ 2. Inspections and Tests. It shall be unlawful for any person, firm or corporation to put into service any installation covered by this chapter whether such installation is newly installed, relocated or altered materially without such installation being inspected and approved by the administrative authority. The installer of any equipment included in this chapter shall notify the administrative authority seven days prior to completion of the installation for such inspection. The administrative authority shall have the authority to require such tests as he may deem necessary to prove the safe operation of any installation.

~~(3)~~ 3. Approval. A certificate or letter of approval shall be issued by the administrative authority for such installation when the entire installation is completed in conformity with this chapter. The entire installation shall include all enclosures or shafts, gates, doors, machinery safety and control devices and all other appurtenances necessary.

SBC 8805 Accidents.

~~(1)~~ 1. To Be Reported. The owner or person in control of an elevator or other installation covered by this chapter shall promptly notify the administrative authority of any accident to a person or apparatus, on, about or in connection with such elevator or other installation, and shall afford the administrative authority every facility for investigating such accident and the damage resulting therefrom. Notification may be given to the administrative authority by telephone or verbally, but such notification shall be confirmed in writing.

~~(2)~~ 2. Investigation. The administrative authority shall make or cause to be made an investigation and the report of such investigation shall be placed on file in his office. Such report shall give in detail the cause or causes, so far as they can determine and such report shall be open to public inspection.

~~(3)~~ 3. Operation Discontinued. When an accident involves the failure or destruction of a part of the installation or the operating mechanism, the elevator or other installation shall be taken out of service and shall not be used again until it has been made safe and such reuse approved by the administrative authority. The administrative authority may, if deemed necessary, order the discontinuance of operation of any such elevator or installation until a new certificate of approval has been issued.

~~(4)~~ 4. Removal of Parts Restricted. No part of the damaged installation, construction or operating mechanism shall be removed from the premises until permission is granted by the administrative authority.

SBC 8806 Elevators, Dumbwaiters, Escalators and Moving Walks.

~~(1)~~ 1. Applicable Standards. Except as otherwise specifically provided herein, compliance with the American Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks, ANSI A17.1-1971, including supplements A17.1(a)-1972 and A17.1(b)-1973 as amended, shall be evidence that such equipment and devices comply with the requirements of this Chapter.

All references in ANSI A17.1-1971 to the National Electrical Code ANSI C1-1968 shall be changed to read, "National Electrical Code, ANSI C1-1971 (NFPA 70-1971)."

~~(2)~~ 2. ~~Prohibited Installation~~ Exceptions and Amendments to ANSI A17.1.

(a) Winding drum machine. Winding drum machine shall not be permitted on new elevator installations nor replacements on existing installation.

(b) Swing doors. Horizontal swing doors, either single section or center opening two section, shall not be permitted on new elevator installations nor as replacements on existing installations, except the administrative authority may approve such installation if the conditions are such as to make it impossible to install other than swing doors.

(c) Side Exits. Side emergency exits on elevator cars shall not be permitted.

(d) Solid Bumpers. Solid bumpers shall not be permitted on new installations nor as a replacement on existing installations.

(e) Clearances. The minimum pit depth shall be not less than three (3) feet. Overhead clearance shall be not less than two (2) feet with piston in stop ring and in no case less than three (3) feet when car is leveled at top landing.

(f) Door Unlocking Devices. Hoistway door unlocking devices shall not be permitted except at the bottom landings.

1. Top and bottom landings shall be provided with hoistway access switches conforming to rule 111.9b and 111.9c of ANSI A17.1-1971.

2. The door at the lowest landing shall be provided with a special key not easily duplicated and said key shall be available only to elevator mechanics and inspectors. The interlocks shall be designed and adjusted as to prevent movement of the car until after the door is closed and in the locking position.

3. Access to Hoistways for Emergency Purposes.

(a) The elevator shall have hoistway doors which are unlocked when closed with the car at floor, or locked but openable from landing by means effective only when car is in landing zone.

(b) The operating means for unlocking the doors shall be kept on the premises by the person responsible for the maintenance and operation of the elevators in a location readily accessible to qualified persons in case of an emergency but where they are not accessible to the general public.

(g) Elevator doors shall provide a clear opening of at least 32 inches.

(h) Automatic closing doors shall have a closing interval of not less than 3 seconds.

(i) At least one elevator must be provided for fire department emergency access to all floors. Said elevator cab shall be of such size to accommodate an ambulance cot in its horizontal open position, minimum inside clear platform dimensions of 6'8" x 4'3".

(j) Exterior elevator call buttons shall be placed not higher than 42 inches above the floor. No emergency stop switch, door opening and door closing buttons shall be placed higher than 36 inches above the floor. The elevator floor selector buttons shall be placed on a car operating panel directly above or adjacent to the emergency stop switch and the door opening and closing buttons.

(k) Standby Power. In every building over one story and more than 75 feet in height, emergency power shall be provided for at least one elevator in each bank. This emergency power shall be automatically transferable to any other elevator in the bank and shall be capable of operating the elevator with a full load at contract speed or not less than 150 feet per minute. Emergency power shall be provided by an approved self-contained generator set to operate whenever there is a loss of power in the normal power supply. The generator shall be in a separate room having at least a One Hour Fire Resistive Occupancy Separation from the remainder of the building and shall have a fuel supply adequate to operate the equipment for two hours. See UBC Standards 18-1.

(l) Emergency Communications. Every elevator car shall be provided with a two-way communication system connected to an approved emergency service which operates 24 hours every day.

(m) Operating Devices. All operating devices shall be of the enclosed electric type. Rope or rod operated devices activated by hand, or rope operating devices activated by wheels, levers or cranks, shall be removed.

EXCEPTION: This shall not be considered a material change.

(n) Unsafe Conditions. When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the Administrative Authority a full and true report of such inspection and such unsafe condition. If the Administrative Authority finds that the unsafe condition endangers human life, he shall cause to be placed on such elevator, escalator or moving walk in a conspicuous place, a notice stating that such conveyance is unsafe. The owner shall see to it that such notice of unsafe condition is legibly maintained where placed by the Administrative Authority. The Administrative Authority shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance which are necessary to render it safe, and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only by the Administrative Authority when he is satisfied that the unsafe conditions have been corrected.

(o) A guarded light and convenience outlet shall be provided on the top and underside of each elevator car.

~~(3)~~ 3. Limited Use of an Elevator.

When a building or structure is to be equipped with one or more elevators, at least one of such elevators may be approved for limited use prior to the completion of the building or structure.

The use of such elevators may be permitted by the administrative authority under the authority of a limited permit issued by him for each class of service. Such limited permit shall specify the class of service permitted and it shall not be issued until the elevator has been tested with rated load and the car safety and terminal stopping equipment have been tested to determine the safety of the equipment and until permanent or temporary guards or enclosures are placed on the car and around the hoistway and at the landing entrance on each floor. Landing entrance guards shall be provided with locks that can be released from the hoistway side only. Automatic and continuous pressure elevators shall not be placed in temporary operation from the landing push buttons unless door locking devices and/or interlocks are installed and operative.

~~(4)~~ 4. Access to Elevator Pits. A pit ladder shall be provided for each elevator in all pits where access is from the bottom landing. Access to elevator pits which extend more than eighteen (18) inches below the sill of the pit access door shall have a pit ladder as required.

~~(5)~~ 5. ~~Hand-powered Elevators~~ Dumbwaiters and ~~Dumbwaiters~~ Hand-powered Elevators.. All ~~hand-powered elevators~~ dumbwaiters and ~~dumbwaiters~~ hand-powered elevators shall be equipped with a broken rope safety device.

~~(6)~~ 6. Car Safety Mechanism Switch. Car safety mechanism switches shall be of the manually reset type.

~~(7)~~ 7. Hoistway Door Protection in ~~Hospitals, Nursing Homes and Homes for Aged~~ Passenger Elevators. Hoistway doors on all passenger elevators ~~in hospitals, nursing homes, homes for the aged and similar occupancies~~ shall not be solely dependent upon the door edge reopening device for protection from the doors closing on an obstruction, but shall also be provided with an approved light beam or electronic door protection device.

~~(8)~~ 8. Emergency Elevators. ~~In all buildings or structures over 40 feet in height where one or more elevators are installed, at least one or more, if necessary, to provide access to all landings, of such elevators shall be equipped or arranged so as to operate as an emergency elevator as provided herein.~~

~~Electric power to the emergency elevator shall be such as to automatically provide power to such elevator in the event of failure of the normal building electric power supply and may be made to any emergency electric power source approved by the administrative authority and as provided in the electrical requirements of the State Building Code. In the event there is not emergency electric power available in the building, the emergency elevator shall be connected to the line side of main service to the building and shall have its own protection and disconnecting means separated from the main building service so as to minimize the possibility of simultaneous interruption of supply through an occurence in the building.~~

~~(a) Automatic Elevators.~~

~~Such elevators shall be placed in operation as an emergency elevator by means of a key operated switch with a light jewel located adjacent to the elevator at the street floor landing. Such key operated switch when turned to the "on" position shall remove the elevator from regular service and place it in operation as an emergency elevator.~~

~~The key operated switch shall, when operated, cancel existing car calls, prevent the registration of any further calls, prevent the opening of the elevator doors at any landing except at the landing at which the switch is located or operated by bypassing all other landing calls.~~

~~When the elevator arrives at the landing at which the switch is located, the doors shall open and remain open until closed by operation of the elevator from the car.~~

~~A key operated switch shall be provided in the car which can be operated only by the key which operates the emergency elevator switch and which when operated, shall permit operation of the elevator only from the car operating buttons and cause the elevator to bypass landing calls. The desired floor button is pushed on the car operating panel and the elevator doors shall close automatically and the elevator shall proceed to the selected floor. Upon arrival of the elevator at the selected floor, the elevator doors shall open automatically and shall remain open until another call is registered on the car operating panel.~~

~~In addition to the above, the operation of the emergency elevator switch shall automatically cut out all light beam type door protective devices on the elevator. The elevator shall operate with protection from the door edge reopening device only.~~

~~Emergency elevator key or keys shall be kept on the premises by the person responsible for the maintenance and operation of the elevators in a location readily accessible to authorized persons in an emergency, but not where they are available to the public.~~

~~(b) Manual Elevators.~~

~~Elevators operated only by a designated operator in the car shall be provided with a signal system to permit signaling of the operator from the main floor to return non stop to a designated main floor.~~

~~(c)--Dual-Operation-Elevators-(Automatic-and-Manual).---Elevators-arranged-for-dual-operation-shall,-when-in-automatic-operation,-conform-to-the-above-rules-for-automatic-elevators-and-when-in-a-manual-operation,-to-the-rules-for-manual-elevators.~~

All keyed switches installed to operate elevators on emergency service will be required to be keyed alike to a pattern approved by the Administrative Authority. In lieu of the above, keys for emergency elevator service may be in a metal box placed in a location approved by the Administrative Authority, provided said box is locked with a 5 pin tumbler core lock or equivalent which is keyed to the same pattern.

9. Amendment to ANSI Supplement A17.1(b)-1973.

Rule 211.3a Automatic-Operation Elevators.

Add new subsection (g) under 211.3a 1. to read as follows:

(g) One (1) car in each bank of automatic-operation elevators serving three (3) or more landings or having a travel distance of twenty-five (25) feet or more shall be provided with emergency service controls or specified in rule 211.3a-4. of this supplement.

Rule 211.3a 2. Reference to NFPA Standard No. 72d shall be 1972 Edition and NFPA Standard No. 13 shall be 1973 Edition.

SBC 8807 Stage and Orchestra Lifts.

Stage and orchestra lifts shall be designed, installed, constructed and maintained so as to be reasonably safe to life, limb and adjoining property and shall be approved by the administrative authority prior to installation or construction.

SBC 8808 Manlifts.

Manlifts shall be designed, installed, constructed, and maintained so as to be reasonably safe to life, limb and adjoining property shall conform to the standards specified in the American National Standard Safety Code for Manlifts. ANSI A90.1-1969 and Regulations of the Department of Labor and Industry.

SBC 8809 Temporary Interior and Exterior Hoists.

Temporary interior and exterior hoists shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property, shall conform to ~~the standard specified by and shall be as approved by the State of Minnesota Industrial Commission.~~ ANSI 10.4 and Regulations of the Department of Labor and Industry.

SBC 8810 Mechanized Parking Garage Equipment.

Mechanized parking garage equipment shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property, shall conform to the standards specified in the American Standard Safety Code for Mechanized Parking Garage Equipment ANSI A113.1-~~1964~~. (R1971)

SBC Appendix C is deleted and replaced by the following:

Appendix C

Variations of Snow Loads. The minimum snow loads for the design of both ordinary and multiple series roofs, either flat, pitched or curved, shall be determined by multiplying the appropriate snow load given in Section 2305(c) by the appropriate coefficients Cs (See Figures 1, 2, 3 and 4). The full intensity of the roof snow load shall be applied to any one contiguous portion of the roof area if it produces a more unfavorable effect than the full intensity applied over the entire roof area. The basic snow load coefficient Cs shall be increased or decreased in accordance with the following conditions:

1. Decreases.

(a) A decrease (due to slide-off of snow load) on the horizontal projection of pitched roofs, of one pound per square foot for each degree, by which the slope angle exceeds 20 degrees. In no case shall the allowable design load be less than 20 pounds per square foot.

TABLE OF PITCH VS DEGREES:

PITCH	DEGREES
2/12	9°-28'
2½/12	11°-46'
3/12	14°-2'
3½/12	16°-15½'
4/12	18°-26'
4½/12	20°-33'
5/12	22°-37'
5½/12	24°-37'
6/12	26°-34'

(b) A decrease of 20 per cent of the basic uniform snow load may be used for rounded (arch) roofs with a ratio of rise to span between 1/8 and 3/8. Roofs with rise to span ratio equal to or greater than 3/8, the basic uniform snow load may be reduced 40 per cent. In no case shall the allowable uniform snow load be less than 20 pounds per square foot.

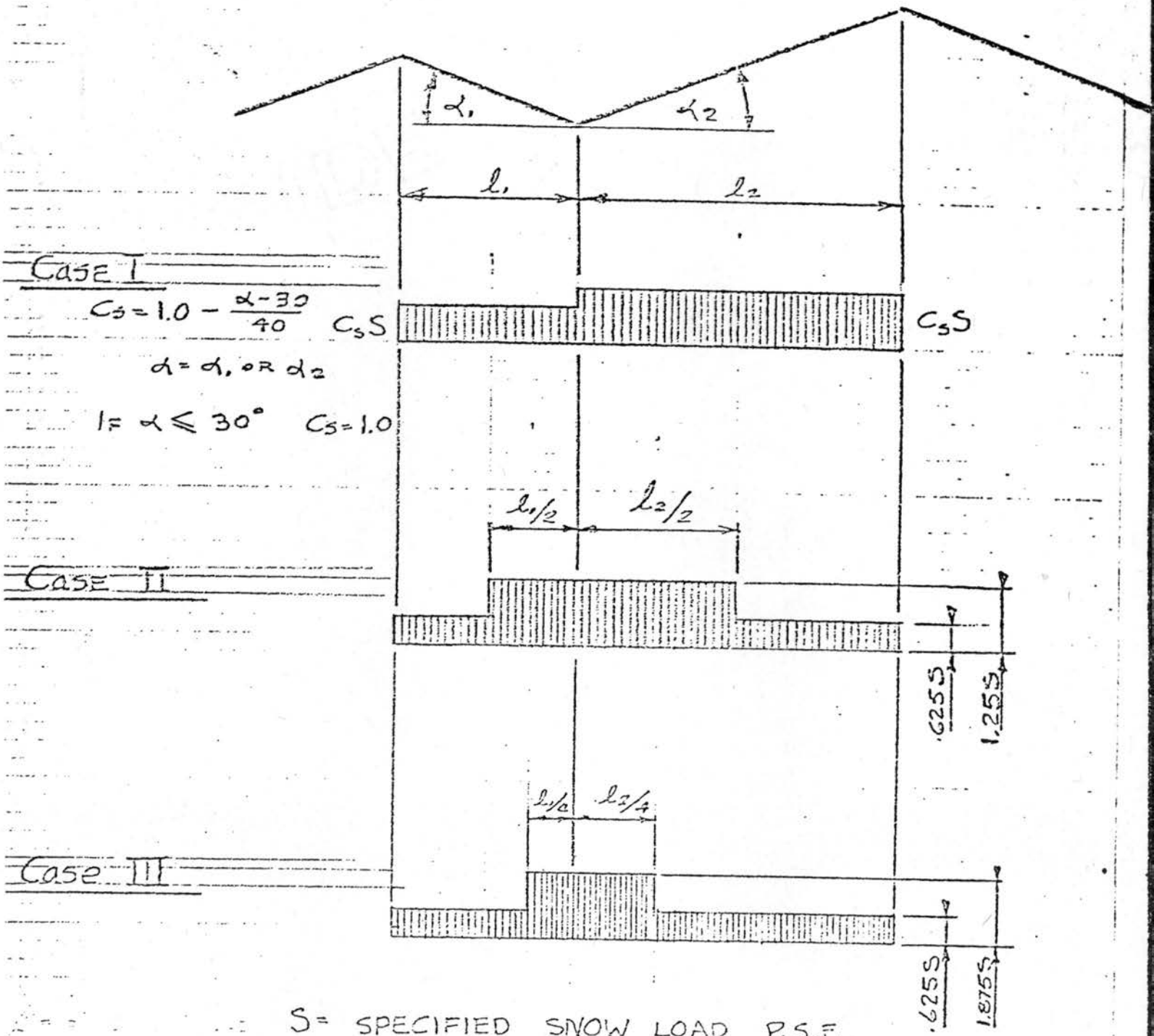
2. Increases. The basic roof loads shall be increased for the following conditions:

(a) Roof Valley Condition in accordance with Figure No. 1 and applicable load cases.

(b) Roof areas abutting vertical walls, of adjacent buildings in accordance with Figure No. 2 and applicable formulas.

(c) Lower level roof areas abutting sloping upper roof areas in accordance with Figure No. 3 and applicable descriptive conditions.

(d) Roof areas adjacent to or containing projections and/or obstructions in accordance with Figure No. 4 and applicable formulas.



S = SPECIFIED SNOW LOAD P.S.F.

C_s = COEF. OF INCREASED SNOW LOAD DUE TO LOCATION

$\beta = \frac{\alpha_1 + \alpha_2}{2}$

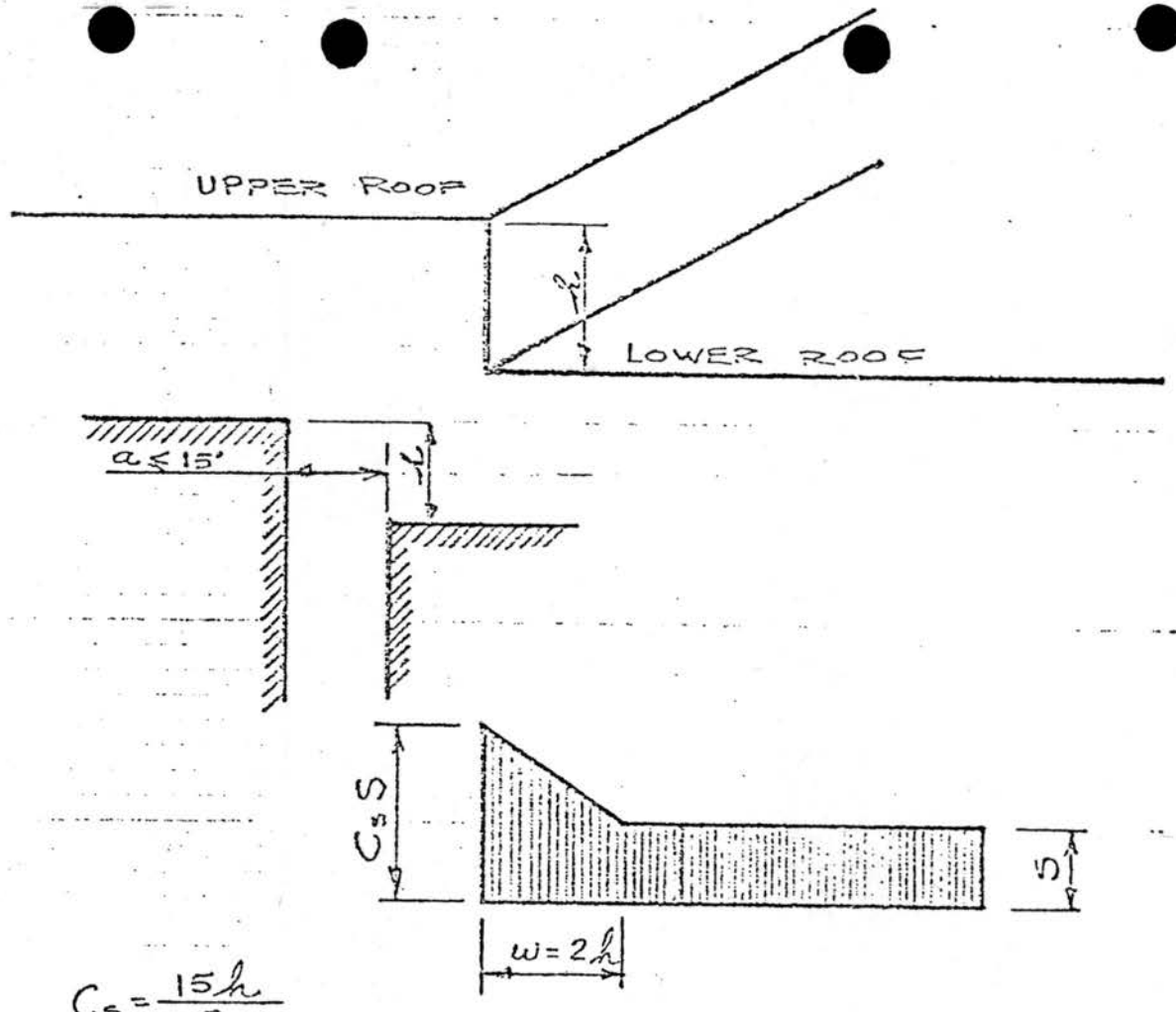
IF $\beta \leq 10°$ USE CASE I

IF $10° < \beta < 20$ USE CASE I & II

IF $\beta \geq 20°$ USE CASE I, II & III

FIGURE NO. 1

VALLEY AREA OF SLOPED ROOFS



$$C_s = \frac{15h}{S}$$

w (MINIMUM) = 10 FT.
w (MAXIMUM) = 30 FT.

IF $\frac{15h}{S} < 1.0$ $C_s = 1.0$

IF $\frac{15h}{S} > 3.0$ $C_s = 3.0$

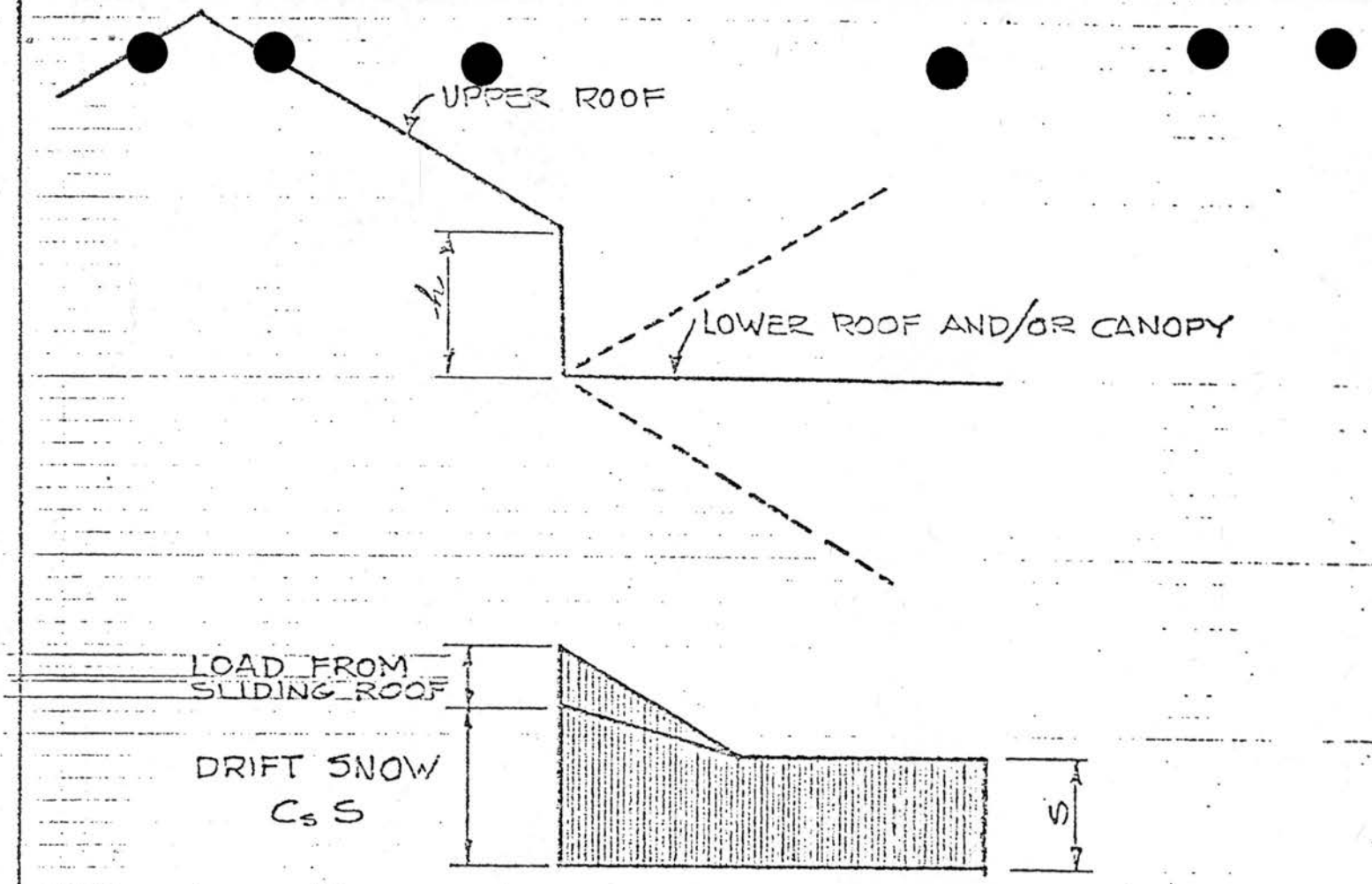
IF $h < 5$ FT. $w = 10$ FT.

IF $h > 15$ FT. $w = 30$ FT.

h = HEIGHT DIFFERENCE IN ROOFS IN FEET
w = WIDTH OF DRIFT IN FEET
a = DISTANCE BETWEEN BUILDINGS IN FEET
S = SPECIFIED SNOW LOAD IN P.S.F.
C_s = COEFFICIENT OF INCREASED SNOW LOAD

FIGURE NO. 2

LOWER LEVEL OF MULTI-LEVEL ROOFS



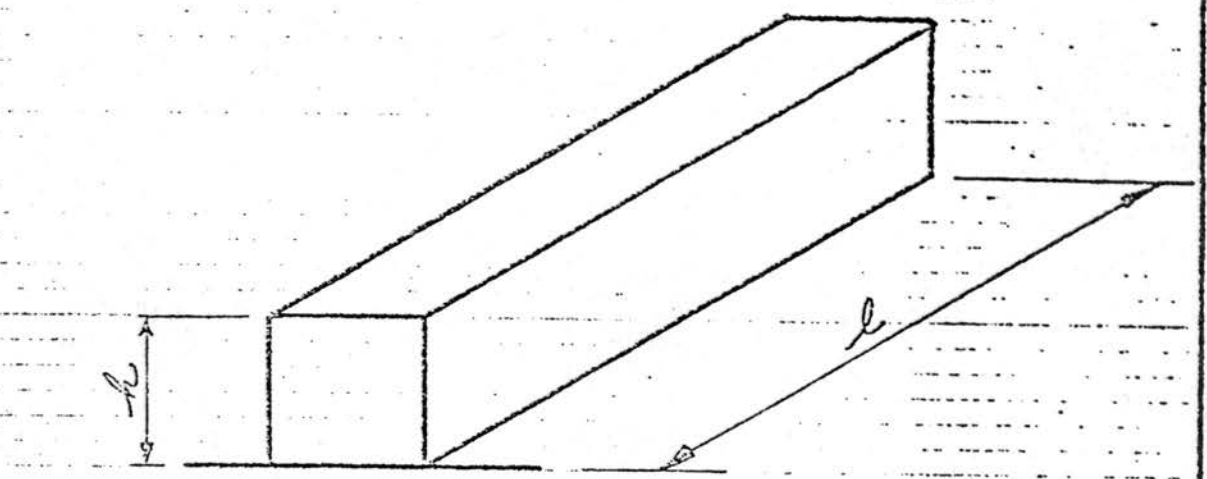
DESIGN LOWER ROOF OR CANOPY FOR LOADS ACCORDING TO FIGURE II + 50% OF DESIGN LOAD FROM UPPER. THE DISTRIBUTION SHOULD BE MADE DEPENDING ON THE RELATIVE SIZES, SLOPES AND POSITIONS OF THE TWO ROOFS.

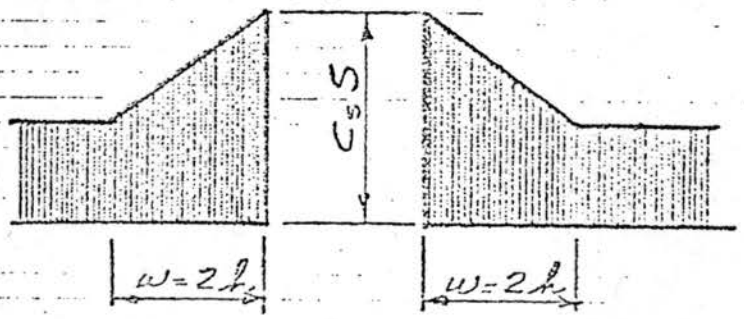
IF, BECAUSE OF A RELATIVELY SMALL LOWER ROOF OR CANOPY, ALL OF THE SLIDING SNOW CANNOT BE RETAINED, APPROPRIATE REDUCTIONS MAY BE MADE. THE DENSITY OF SLIDING SNOW MAY BE RATHER HIGH.

DESIGN UPPER ROOF AS THOUSH IT IS A SINGLE SPAN BUILDING.

FIGURE NO. 3

LOWER ROOF WITH SLOPING UPPER ROOF





w (MINIMUM) = 10 FEET

w (MAXIMUM) = 30 FEET

$$C_s = \frac{10h}{S}$$

IF $\frac{10h}{S} < 1.0$ $C_s = 1.0$

IF $\frac{10h}{S} > 2.5$ $C_s = 2.5$

IF $l < \frac{S}{4.8}$ $C_s = 1.0$

IF $h < 5$ FEET $w = 10$ FEET

IF $h > 15$ FEET $w = 30$ FEET

h = HEIGHT OF OBSTRUCTION IN FEET

w = WIDTH OF DRIFT IN FEET

l = LENGTH OF OBSTRUCTION OR PROJECTION IN FEET

S = SPECIFIED SNOW LOAD IN P.S.F.

C_s = COEFFICIENT OF INCREASED SNOW LOAD

FIGURE NO. 4

PROJECTIONS & OBSTRUCTIONS

PROPOSED AMENDMENTS TO

MINNESOTA PLUMBING CODE

NOTE: The present wording is shown with a line drawn through the words that are to be deleted and the proposed new wording is underlined.

Page 19 Table 123(c)(3) after 3H (Seamless Copper Tube, Type L, Hard Temper): add the following:

	ASTM	Other Specifications
3H(a) Welded Copper Alloy 194 Water Tube, Type "Heavy," Hard Temper	B543-72	OFT194-101A Navfac TS-15400
3H(b) Stainless Steel Water Tubing, Type SL, Copper Plated Coating (HWT-T439)	A-268 A-651	

Page 19 Table 123(c)(3) after 3J (Seamless Copper Tube, Type M, Hard Temper): add the following:

3J(a) Welded Copper Alloy 194 Water Tube, Type "Standard," Hard Temper	B543-72	OFT194-101A Navfac TS-15400
3J(b) Stainless Steel Water Tubing, Type SM, Copper Plated Coating (HWT-T439)	A-268 A-651	

Page 21 Table 123(c)(3) after SPECIAL WASTES add the following:

	ASTM
6J Polypropylene (Type II 24308)	D2146

Page 22 MHD 123(d)(3) is amended as follows:

(ff) Copper tube 3H, 194 Water Tube 3H(a) or Stainless Steel Water Tubing 3H(b) with 3N fittings

(gg) Copper tube 3J, 3G, 194 Water Tube 3J(a), or Stainless Steel Water Tubing 3J(b) with 3N fittings may be installed exposed or in frame partitions, or in tunnels and shafts, except that this material may not be laid underground or embedded in masonry or concrete.

Page 23 MHD 123(d)(8) add the following:
add: (dd) Plastic 6A and 6B and fittings

Page 23 MHD 123(d)(9) is amended as follows:

(ff) Plastic 6A or 6B with corresponding fittings ~~may be installed, exposed, or in frame partitions, or in tunnels and shafts~~, except ~~that this material may not be laid underground or embedded in masonry or concrete, and~~ that no stack or horizontal drain exceed 35 feet in total length.

Page 24 MHD 123(d)(10) add the following:

add: <u>(gg) Plastic 6A and 6B with fittings</u>

Page 24 MHD 123(d)(11) is amended as follows:

(hh) Plastic 6A or 6B with corresponding fittings ~~may be installed, exposed or in frame partitions, or in tunnels and shafts,~~ except ~~that this material may not be laid underground or embedded in masonry or concrete, and~~ that no stack ~~of~~ <u>or</u> horizontal vent exceed 35 feet in total length.

Page 33 MHD 126(b)(1) is amended to read as follows:

(b) Backwater Valves

(1) Where Used. ~~Backwater valves may be used when placed on the branch of the building drain that received only the discharge from basement fixtures.~~

~~A quick-opening gate valve or other approved shut-off valve, not less in diameter than the pipe in which it is to be installed, may be used on the basement branch of the sewer system where such a valve is necessary to prevent the flooding of the basement during a heavy storm.~~

Drainage piping serving fixtures that are located below the elevation of the curb or property line at the point where the building sewer crosses under the curb or property line, and above the crown level of the main sewer, shall drain by gravity into the main sewer, and shall be protected from back flow of sewage by installing an approved back water valve, and each such back water valve shall be installed only in that branch or section of the drainage system which received the discharge from fixtures located below the elevation of the curb or property line.

Further, in every building hereafter erected or remodeled for dwelling purposes, if any portion of the dwelling level is located below the elevation of the point where the building sewer crosses under the curb or property line, all fixtures installed below such point shall be connected to a separate branch drain. Eash such branch drain shall be protected by an approved back water valve and a gate valve. The gate valve shall be located on the sewer connection side of the back water valve.

Further, the back water valve and gate valve may be waived by the Administrative Authority whenever there are separate public storm and sanitary sewers in the street into which the building sewer is connected and the building is located at a sufficient height above the public sanitary sewer so flooding by backflow will not occur, in the opinion of the Administrative Authority.

Exhibit 4

STATE OF MINNESOTA

COUNTY OF RAMSEY

In the matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code

AFFIDAVIT

Herbert W. Meyer, being duly sworn, on oath deposes and says:

1) That he is an employee of the Department of Administration of the State of Minnesota

2) That on the 10th day of October, 1973, he requested from the Secretary of State's office for the State of Minnesota current list of all representatives of associations and other interested groups or persons who had registered their names with the Secretary of State for the purpose of obtaining notices of public hearings relating to the promulgation of regulations pursuant to M.S. 15.0412.

3) That on the 15th day of October, 1973, in response to the above request, the Secretary of State provided him with such a list, a copy of which is attached hereto and incorporated by reference. Further affiant sayeth not.

Herbert W. Meyer

Herbert W. Meyer
State Building Inspector
Minnesota Department of Administration

Subscribed to and sworn to before me this 22nd day of October, 1973.

JEAN MORLEY
Notary Public, Ramsey Co., Minn.
MY COMMISSION EXPIRES
September 30, 1980

STATE OF MINNESOTA

COUNTY OF RAMSEY

In the matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code

AFFIDAVIT OF MAILING

Herbert W. Meyer, being first duly sworn, deposes and says:

That on the 18th day of October, 1973, at the City of St. Paul, County of Ramsey, State of Minnesota, he served the attached Notice of Hearing by depositing in the United States mail at said City of St. Paul, a true and correct copy thereof, properly enveloped, with postage prepaid, to all local governmental units, all persons and associations at the addresses listed on the attached Certificate regarding the Secretary of State, members of the Minnesota Legislature, and other interested individuals.

Herbert W. Meyer

Herbert W. Meyer
State Building Inspector
Minnesota Department of Administration

Subscribed and sworn to before me
this 18th day of October, 1973

JEAN MORLEY
Notary Public, Ramsey Co., Minn.
MY COMMISSION EXPIRES
September 30, 1980

Exhibit #6

STATE OF MINNESOTA

COUNTY OF RAMSEY

BEFORE THE

COMMISSIONER OF ADMINISTRATION

In the matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code

APPOINTMENT

Herbert W. Meyer is hereby appointed to serve as hearing officer on behalf of the Commissioner of Administration in the above-captioned matter, said hearing to be held on November 26 - 27 and 28, 1973, and continue until all representatives of associations or other interested groups or persons have had an opportunity to be heard.

This appointment is made pursuant to Minnesota Statutes 1971, Section 16.86, Subdivision 4.

Dated: October 23, 1973

Richard L. Brubacher

Richard L. Brubacher
Commissioner of Administration

STATE OF MINNESOTA

COUNTY OF RAMSEY

BEFORE THE

COMMISSIONER OF ADMINISTRATION

In the Matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code

FINDINGS OF FACT

The above entitled matter came on for hearing before the Commissioner of Administration of the State of Minnesota on the 26th day of November, 1973, at 8:01 a.m. in the Holiday Inn, St. Paul, Minnesota, after proper notice required by Minn. Stat. 1971, Section 15.0412, Subdivision 4, was served upon all persons, associations and other interested groups registered with the Secretary of State for that purpose.

After affording interested persons an opportunity to present written and oral data, statements and arguments, having heard all the testimony, having considered all of the evidence adduced and upon the records, files and proceedings herein, I find the following regarding the proposed amendments attached hereto:

The following amendments are adopted:

SBC 103 is amended to read as follows:

General. Buildings or structures to which additions, alterations, or repairs are made shall comply with all the requirements for new buildings or structures except as specifically provided in this Code.

SBC 103 Subsection 4 is amended to read as follows:

4. Nonstructural Alterations and Repairs: 25 Per Cent or Less. Alterations or repairs not exceeding 25 per cent of the value of an existing building or structure, which are nonstructural and do not affect any member of part of the building or structure having required fire resistance, may be made with the same materials of which the building or structure is constructed.

   EXCEPTION: The installation or replacement of glass in hazardous locations, as specified in UBC, Section 5406, shall be as required for new installation.

SBC 103 continued next page.

SBC 103 Subsection 5 is amended to read as follows:

5. Existing Occupancy. Buildings in existence at the time of the passage of this Code may have their existing use or occupancy continued, if such use or occupancy was legal at the time of passage of this Code, provided such continued use is not dangerous to life or property.

   Any change in the use of occupancy of any existing building or structure shall comply with the provisions of UBC, Section 306 and Section 502.

SBC 103 Subsection 6 is amended to read as follows:

6. Moved Buildings. Buildings or structures moved from one location to another location shall comply with the provisions of this Code for New Buildings.

SBC 103 is amended by adding a new subsection to read as follows:

8. Maintenance. All buildings or structures both existing and new, and all parts thereof, shall be maintained in a safe and sanitary condition. All devices or safeguards which are required by this Code in a building or structure when erected, altered, or repaired, shall be maintained in good working order. The owner or his designated agent shall be responsible for the maintenance of buildings or structures.

SBC 103 is amended by adding a new subsection to read as follows:

9. Unsafe Building Appendages. Parapet walls, cornices, spires, towers, tanks, statuary and other appendages or structural members which are supported by, attached to, or a part of a building and which are in a deteriorated condition or are otherwise unable to sustain the design loads which are specified in this Code, are hereby designated as unsafe building appendages. All such unsafe building appendages are public nuisances and shall be abated in accordance with UBC, Section 203, of this Code.

SBC 104 is amended to read as follows:

Wherever the term"Administrative Authority" appears in this Code, the words "Building Official" shall be substituted therefore.

Wherever the terms "Mayor" or "City Council" appear in this Code, the words "Governing Body" shall be substituted therefore.

Wherever the term "City" appears in this Code the word "Municipality" shall be substituted therefore.

SBC 104 continued next page.

SBC 104 Continued:

"Municipality" means any city, village, borough, county, town acting through its town board or other instrumentality of state government otherwise authorized by law to enact a building code, which as, of May 27, 1971, has such a building code or which subsequently enacts a building code.

SBC 107 is deleted in its entirety.

SBC 108 Fallout Shelters is amended to read as follows:

Whenever it has been determined by the Department of Public Safety, Division of Civil Defense and the State Architectural Engineer that fall-out protection is needed for a particular location the "Technical Requirements for Fall-Out Shelters" as contained in Appendix "B" shall be complied with.

SBC Chapter 1 is amended adding a new section to read as follows:

SBC 110 Appendices. All appendices, annexes and supplemental material listed in the Code shall be mandatory in all cases, except for the material listed below, which may be adopted without change at the discretion of any municipality.

1. SBC Appendix A, D, E, and F.

2. 1973 UBC Appendix - Chapters 13, 15, 38, 48, 49, 51, 57, and 70.

3. Minnesota Plumbing Code Appendices A, C, D, and F.

4. Flood Proofing Regulations, Section 201.2 through 208.2.

The above amendments are adopted to up-date basic Code standards, setting forth the breadth and application of the State Building Code and clarify which Building Code appendices are mandatory and which are optional.

SBC 201 is deleted in its entirety and the following inserted in lieu thereof:

SBC 201 Adoption of UBC by Reference. Chapters 2 through 60 and appendix of the 1973 Edition of the Uniform Building Code, hereinafter "UBC", as promulgated by the International Conference of Building Officials, is incorporated by reference and hereby made part of the State Building Code, except as qualified by Section SBC 110, said UBC shall constitute chapters 4 through 70 (SBC 401 through 7001) of the State Building Code and shall be subject to the following alterations and amendments:

Chapter 2 - "Organization and Enforcement" of the UBC shall be placed in the appendix of this Code and may be adopted by municipalities, provided, however, that when or where a Board of Appeals is created by a municipality, pursuant to Chapter 2 of the UBC, all decisions or findings by such board shall be reported to the State Building Inspector within fifteen (15) days of such decision or finding.

SBC 201 continued next page

SBC 201 Continued:

Chapter 3 - "Permits and Inspections" of the UBC shall be placed in the appendix of this Code and may be adopted by municipalities. When permits are required or issued by municipalities for any construction covered by this Code, inspection as set forth in Section 304(d) of the UBC shall be performed for construction regulated by said Code, and inspections shall be performed for all permits issued or required for other work or construction regulated by this as are necessary to ensure compliance with this Code.

SBC 201 is adopted to incorporate the latest edition of the Uniform Building Code in order to adhere so far as is practicable to Minn. Stat.,Section 16.85, and to keep abreast of recent developments in the building field. Certain amendments, exceptions and modifications are also adopted to reflect the particular status of construction practices in the State of Minnesota.

SBC 201 - Chapters 2 and 3 are adopted and placed in the appendix to provide guidelines for municipalities to ensure proper administrative practices.

Chapter 5 of the UBC is amended by adding a new section to read as follows:

Section 512. Roof Access. Unless specifically exempted by the Building Official due to space limitations, roof height above grade or other special considerations, buildings on which any heating, air conditioning, or refrigeration equipment is hereafter installed on the roof and which equipment will require periodic inspection, service and maintenance in accordance with the mechanical code - SBC 7101 through SBC 8810 shall 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 shall be provided to make such equipment safely accessible. Said stair leading to the scuttle or bulkhead shall 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 shall be more than nine inches and handrails shall be provided on both sides of the access stairs. The minimum opening of the scuttle or bulkhead shall be not less than nine square feet in area with the minimum dimension being not less than two feet. In no case shall this required access be located in or pass through the elevator shaft or elevator machine room.

Equipment should be located with at least six feet of clearance from the edge of the roof or similar hazards. If the clearance is less than six feet, a suitable rail or guard not less than forty-two inches in height shall be provided.

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

Chapter 5 of the UBC continued next page.

Chapter 5 of the UBC Continued:

Table 5-A, D.2, of the UBC is amended to read as follows:

D.2 Nurseries for full-time care of children under kindergarten age. Hospitals, sanitariums, sanatoriums, nursing homes with non-ambulatory patients, and similar buildings (each accommodating five (5) or more persons).

Table 5-A, D.3 of the UBC is amended to read as follows:

D.3 Boarding care homes, residential care facilities for ambulatory persons, homes for children of kindergarten age or over (each accommodating five (5) or more persons).

SBC 201 - Chapter 5 is amended for adoption to provide proper maintenance of equipment in Section 512 and to provide conformity to present State Law for Tables 5-A, D.2 and 5-A, D.3.

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

Section 802(c) Special Provisions. Rooms in Division 1 and 2 Occupancies used for day care purposes, kindergarten pupils and Division 3 Occupancies shall not be located above the first story.

Storage and janitor closets shall be of one-hour fire-resistive construction. Stages and enclosed platforms shall be constructed in accordance with Chapter 39. For attic space partitions and draft stops, see Section 3205.

Section 802(c) of the UBC is adopted to conform to the requirements promulgated by the State Board of Education.

Section 810 of the UBC is amended as follows:

Section 810 Approved fire alarms shall be provided for all Division 1 and 2 Group C Occupancies with an occupant load of more than 50 persons and in Division 3 Group C Occupancies with an occupant load of more than 29 persons. In every Group C Occupancy provided with an automatic fire-extinguishing or detection system, the operation of such system shall automatically activate the school fire alarm system.

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

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

1. A complete non-coded continuously sounding until manually reset, electrically supervised type.

Section 810 continued next page.

Section 810 of the UBC continued:

2. Shall have sounding stations on 100 foot to 150 foot spacing; (a) in corridors, (b) in areas of high noise levels, such as band rooms, shops, boiler rooms, (c) a weatherproof station on exterior of building facing residential areas.

3. Shall have automatic sending stations (detectors) in boiler rooms, kitchens, shops, painting areas, lounges, laundries, janitors' closets, storerooms, etc., or unsupervised and unoccupied spaces; namely, critical or hazardous areas.

4. Manual sending stations shall be provided in the natural path of escape from fire, near each exit from an area, on each floor, and shall be readily accessible, unobstructed and at visible locations.

Section 810 of the UBC is adopted to conform to State Fire Marshal requirements and provide an important measure of fire protection to residents of this State.

Section 901 of the UBC is amended to read as follows:

Division 2. Hospitals, sanitariums, sanatoriums, nursing homes and similar buildings, nurseries for full-time care of children under kindergarten age (each accommodating five (5) or more persons).

Division 3. Boarding care homes, residential care facilities for ambulatory persons, homes for children of kindergarten age or over, (each accommodating five (5) or more persons). Residential care facilities for ambulatory persons shall include, but not be limited to facilities for the treatment of alcoholism or drug dependency, for retarded children and adults, and child care institutions.

For Occupancy Separations see Table No. 5-B.

For Occupant load see Section 3301.

EXCEPTION: Group D Occupancies shall not include buildings used only for private residential purposes or for a family group.

Section 902(b) of the UBC is amended to read as follows:

Section 902(b) Special Provisions. Division I Occupancies shall be housed in buildings of Type I or Type II construction.

Every story of a Group D, Division 2 Occupancy accommodating more than five (5) non-ambulatory persons, unless provided with a horizontal exit, shall be divided into not less than two compartments accommodating approximately the same number of non-ambulatory persons in each compartment by a smokestop partition meeting the requirements of a one-hour occupancy separation so as to provide an area of refuge within the building.

Section 902 continued next page.

Section 902(b) Continued:

Corridor openings in the smokestop partition shall be protected with doors as required in Section 3304(h). Other openings shall be 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.

Rooms occupied by inmates or patients whose personal liberties are restrained, shall have noncombustible floor surfaces. For attic space partitions and draft stops, see Section 3205.

Section 905 of the UBC is amended to read as follows:

Section 905. All portions of Group D Occupancies customarily used by human beings shall be provided with light and ventilation by means of windows or skylights with an area equal to one-eights of the total floor area, one-half of which shall be openable, or shall be provided with artificial light and a mechanically operated ventilating system as specified in Section 605 and SBC 7720.

For requirements on Water Closets, See Section 1711.

Section 909 of the UBC is amended to read as follows:

Section 909. An approved fire alarm shall be provided for all Group D Occupancies.

Audible alarm devices shall be used in all non-patient areas. Visible alarm devices may be used in lieu of audible devices in patient occupied areas. An approved alarm system shall comply with Section 810.

Section 901, Section 902(b), Section 905 and Section 909 of the UBC are adopted to conform to present State Law, Minn. Stat., Section 144.50 - 144.58, and requirements of the State Fire Marshal.

Section 1307(a) of the UBC is amended to read as follows:

Section 1307(a) Ceiling Heights. Habitable rooms shall have a ceiling height of not less than 7 feet 6 inches. Hallways, corridors, bathrooms, storage rooms, laundry rooms and water closet rooms shall have a ceiling height of not less than 7 feet measured to the lowest projection of the ceiling.

If any room in a building immediately below a sloped roof has a sloping ceiling caused by the slope of the roof, the prescribed ceiling height for the room is required in only one-half the area thereof. No portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.

Section 1307(a) continued next page.

Section 1307(a) continued:

> If a room has a furred ceiling, the prescribed ceiling height is required in two-thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet.
>
> Any portion of a garage shall have an unobstructed headroom clearance of not less than 6 feet 6 inches above the finish floor to any ceiling, beam, pipe, or similar construction except for wall-mounted shelves, storage surfaces, racks, or cabinets.

Section 1307(a) of the UBC is adopted to clarify required height in sloping ceilings.

Chapter 13 of the UBC is amended by adding a new section to read as follows:

Section 1314. Sound Transmission Control.

Sound transmission control shall be provided to meet the standards defined in UBC Appendix Chapter 35.

Section 1315. Deadbolt Locks Required. All exit doors leading to public areas from all dwelling units and hotel units shall be provided with deadbolt locks, at least one of which must be capable of being locked from the exterior of said 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.

Deadbolt locks having a bolt moved by turning a key shall be of the five-pin tumbler type or an approved equivalent. Lock throw shall be not less than three-quarters inch (3/4"). Locks shall meet the requirements of UBC, Section 3303(c).

Sections 1314 and 1315 of the UBC are adopted to conform to sound pollution requirements and for security in residential occupancies.

Section 1407(a) of the UBC is amended to read as follows:

Section 1407(a). Ceiling Heights. Habitable rooms, storage rooms and laundry rooms shall have a ceiling height of not less than 7 feet 6 inches. Hallways, corridors, bathrooms, storage rooms, laundry rooms and water closet rooms shall have a ceiling height of not less than 7 feet measured to the lowest projection of the ceiling.

If any room in a building immediately below a sloped roof has a sloping ceiling caused by the slope of the roof, the prescribed ceiling height for the room is required in only one-half the area thereof. No portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall be included in any computation of the minimum area thereof.

Section 1407(a) continued next page.

Section 1407(a) continued:

If any room has a furred ceiling, the prescribed ceiling height is required in two-thirds the area thereof, but in no case shall the height of the furred ceiling be less than 7 feet.

Section 1407(a) of the UBC is adopted to clarify required height in sloping ceilings.

Section 1706(d) of the UBC is amended to read as follows:

Section 1706(d). Elevator Shafts. Shafts housing elevators and extending through more than two stories shall be vented to the outside. The area of vents shall be not less than 3 1/2 per cent of the area of the elevator shaft, with a minimum of 3 square feet per elevator.

Section 1706(d) of the UBC is adopted in the first paragraph of SBC 201.

(Note: This amendment was proposed for deletion, but was accepted as is by motion of the Building Code Standards Committee)

Section 1716 of the UBC is amended to read as follows:

Section 1716. All unenclosed floor and roof openings; open and glazed sides of landings; balconies or porches which are more than 30 inches above grade; and roofs used for other than service of the building, shall be protected by a guardrail. Guardrails shall be not less than 42 inches in height. Open guardrails and stair railings shall have intermediate rails or an ornamental pattern such that no objects 9 inches in diameter can pass through. The height of stair railings may be as specified in Section 3305(i).

EXCEPTION 1: Guardrails need not be provided on the loading side of loading docks.

EXCEPTION 2: In Group I Occupancies guardrails shall be not less than 36 inches in height.

Section 1716 of the UBC is adopted to conform to past practices under the 1971 State Building Code requirements and will be incorporated in the 1977 Edition of the Uniform Building Code.

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

Section 2305(c). Snow Loads. Snow loads full or unbalanced shall be considered 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, St. Louis, Scott and Washington. A basic snow load of 30 lbs. per square foot of horizontal projection is required for all other counties not mentioned above.

Section 2305(c) continued next page.

Section 2305(c) continued:

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 Appendix C.

EXCEPTION: These requirements shall not apply to Group I and J Occupancies.

(Note: An editorial change was made in SBC 110 to delete Appendix C from No. 1 because it is mandatory in Section 2305.)

Snow loads in excess of 20 pounds per square foot may be reduced for each degree of pitch over 20 degrees by R_S as determined by the following formula:

$$R_S = \frac{S}{40} - \frac{1}{2}$$

WHERE:

R_S = Snow load reduction in pounds per square foot per degree of pitch over 20°.

S = Total snow load in pounds per square foot.

Section 2314(a) of the UBC is amended to read as follows:

Section 2314(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 foundation. The force shall be assumed to come from any horizontal direction.

The provisions of this Section apply to the structure as a unit and also to all parts thereof, including the structural frame or walls, floor and roof systems, and other structural features.

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

Section 2907(a) General. Footings and foundations, unless otherwise specifically provided, shall be constructed of masonry or concrete and in all cases extend below the frost line. Footings shall be constructed of solid masonry or concrete. Foundations supporting wood shall extend at least 6 inches above the adjacent finish grade. Footings shall have a minimum depth below finished grade as indicated in Table No. 29-A unless another depth is recommended by a foundation investigation.

Section 2907(a) continued next page.

Section 2907(a) continued:

In the absence of a determination by an engineer competent in soil mechanics, the minimum allowable footing depth in feet due to freezing shall be five (5) feet in Zone I and three and one-half (3 1/2) feet in Zone II.

Zone I -- Shall include 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, Mahnomen, Marshall, Mille Lacs, Morrison, Norman, Ottertail, Pennington, Pine, Polk, Red Lake, Roseau, St. Louis, Todd, Traverse, Wadena, 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, Wantonwan, Winona, Wright, Yellow Medicine.

When the soil, natural or fill, is sand or pit run sand and gravel, and of a depth in accordance with minimum footings depth requirements for each zone, slab on grade construction which supports roof and wall loads shall be permitted.

EXCEPTION 1: Group J and I Occupancy.

EXCEPTION 2: Lesser depths may be permitted when supporting evidence is presented by an engineer competent in soil mechanics.

Section 2908(b) of the UBC is amended to read as follows:

Section 2908(b) Determination of Allowable Loads. The allowable axial and lateral loads on piles shall be determined by an approved formula by load tests or by soil support characteristics considering the physical properties of the piles used (see Section 2909). A foundation investigation shall be made by an engineer competent in soil mechanics when cast in place piles are used and when otherwise required by the Building Official.

Section 2908(b) continued next page.

Section 2908(b) continued:

Caissons, when constructed for the support of structures shall be designed in accordance with accepted engineering practice. A foundation investigation shall be made by an engineer competent in soil mechanics, when required.

Section 2305(c), Section 2314(a), Section 2907(a) and Section 2908(b) of the UBC are adopted to make provisions for special climatic and soil conditions indigenous to the State of Minnesota.

Section 3301(c) of the UBC is amended by adding the following definition after the definition of Exit Passageway and before the definition of Horizontal Exit:

Section 3301(c) High Hazard Building is a Group E, Division 1 and 2 Occupancy consisting of a building or buildings which are used for the storage, manufacture or processing of highly combustible or explosive products or materials which are likely to burn with extreme rapidity or which may produce poisonous fumes or explosions; for storage or manufacturing which involves highly corrosive toxic or noxious alkalies, acids or other liquids or chemicals producing flame, fumes, explosives, poisonous irritant or corrosive gases; and for the storage or processing of any materials producing explosive mixtures of dust or which result in the division of matter into fine particles subject to spontaneous ignition.

Section 3301(c) of the UBC is adopted to conform to requirements of Minnesota Department of Labor and Industry and Occupational Safety and Health Administration requirements.

Section 3303(h) of the UBC is amended to read as follows:

Section 3303(h) Change in Floor Level at Doors. Regardless of the occupant load, there shall be a floor or landing on each side of a door. The floor or landing shall be level with, or not more than two inches (2") lower than the threshold of the doorway.

EXCEPTION 1: In Group I Occupancies and within individual units of Group H Occupancies, a door may open on the top step of a flight of stairs or on an exterior landing provided the door does not swing over the top step or exterior landing and the landing is not more than seven and one-half inches (7 1/2") below the floor level.

EXCEPTION 2: In Group I Occupancies, an exterior "storm" door may open and swing over an exterior landing, provided the landing is not more than seven and one-half inches (7 1/2") below either the floor level or the threshold.

Section 3303(h) of the UBC is adopted to recognize special climatic conditions in the State of Minnesota.

Section 3304 of the UBC is amended to read as follows:

Section 3304(h) Openings. Where corridor walls are required to be of one-hour fire-resistive construction by Subsection (g) above, every door opening shall be protected by a tight-fitting smoke barrier and fire assembly having a fire protection rating of not less than 20 minutes when tested in accordance with UBC Standard No. 43-2 without the hose stream test.

Section 3304(h) continued next page.

Section 3304(h) continued:

Doors shall be maintained self-closing or shall be automatic closing in accordance with Section 4306(b)2. Glazed openings of the size and construction permitted for three-fourths-hour fire door assemblies in Section 4306(f) may be installed in such doors. Other interior openings shall be protected by approved 1/4 inch thick wired glass set in steel frames. The total area of all openings, other than doors, in any portion of an interior corridor shall not exceed 25 per cent of the area of the corridor wall of the room which it is separating from the corridor.

EXCEPTION 1: Protection of openings in the interior walls of exterior exit balconies is not required.

EXCEPTION 2: In Type I and II buildings housing Group F-2 Occupancies, corridor walls may be of approved wired glass set in metal frames. The glass height shall not exceed two thirds (2/3) 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 shall be provided to protect the corridor from the Group F-2 Occupancy area (tenant space). The draft curtain shall be located above the glass and extend a minimum of 24" below any finished ceiling in the tenant space. If the finished ceiling is not a fire-rated assembly, the draft curtain shall extend from the wire glass to a rated ceiling or floor assembly. When the F-2 Occupancy area (tenant space) is protected by an approved automatic fire-extinguishing system for a distance of twelve (12) feet in depth adjoining the corridor, and the corridor is not less than twelve (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 twelve (12) feet in widgth, when the entire story is protected by an approved fire-extinguishing system.

In Buildings of other than Type I or Type II construction, this exception shall not be allowed, unless the entire building is provided with an approved automatic fire-extinguishing system.

Section 3307(b) of the UBC is amended to read as follows:

Section 3307(b) Openings. All openings in a wall which provides a horizontal exit shall be protected by a fire assembly having a fire-resistance rating of not less than one and one-half hours. Such fire assembly shall be maintained self-closing or shall be automatic closing by means of products of combustion detectors other than heat as provided in Section 4306(b)2.

Section 3312(b) of the UBC is amended to read as follows:

Section 3312(b) Exit Signs. At every required exit doorway, and wherever otherwise required to clearly indicate the direction of egress, an exit sign with letters at least 6 inches high shall be provided from all areas serving the occupant load specified in this Subsection. In interior stairways the floor level leading direct to the exterior shall be clearly indicated.

Group A Occupancies and Group B, D, and H Occupancies with an occupant load of more than 50.

All other occupancies serving an occupant load of more than 100.

EXCEPTION: Main exterior exit doors which obviously and clearly are identifiable as exits need not be sign posted when approved by the Building Official.

Section 3318(c) of the UBC is amended to read as follows:

Section 3318(c) Corridors. The minimum clear width of a corridor shall be 44 inches, except that corridors serving any area housing one or more non-ambulatory persons shall be not less than eight feet (8') in width. There shall be no change of elevation in a corridor serving non-ambulatory persons unless ramps are used. Boarding care homes and other institutions for residential and ambulatory care shall have a minimum corridor width of six feet (6').

In Group D-1 Occupancies such as jails, prisons, reformatories and similar buildings with open barred cells forming corridor walls, the corridors and cell doors need not be fire-resistive.

Section 3304(h), Section 3307(b), Section 3312(b) and Section 3318(c) of the UBC are adopted to recognize skyway installation practices and to provide conformance to Occupational Safety and Health Administration requirements for exit signs and to conform to the Department of Health regulations for institutional occupancies.

Section 3801(c) of the UBC is amended by adding a new definition after the definition of Fire Department Hose Connection and before the definition of Wet Standpipe:

Section 3801(c) continued next page.

Section 3801(c) continued:

Fire Department Standpipe is a fire line system with a constant water supply and pressure and equipped with Fire Department inlet and outlet connections and installed exclusively for the use of the Fire Department.

Section 3802 of the UBC is amended by adding a new subsection to read as follows:

Section 3802(d) Special Automatic Fire-Extinguishing Systems. In all Occupancies having commercial cooking equipment (see NFPA No. 96A, 1971) automatic fire extinguishing systems complying with UBC Standard 38-1 or 38-2 shall be installed for protection of duct systems, grease removal devices, hoods and over commercial cooking equipment which may be a source of ignition (such as fat fryers, ranges, griddles and broilers). Systems installed in accordance with the following standards are also permitted:

1. Standard for foam-water sprinkler systems and foam-spray systems, NFPA No. 16.

2. Standard for dry-chemical extinguishing system, NFPA No. 17.

EXCEPTION: These requirements shall not apply to Group I Occupancies.

Section 3803 of the UBC is amended to read as follows:

Section 3803(a) General. Fire Department Standpipes shall comply with the requirements of this Section and NFPA 14 - 1973 for Class I standpipes.

Section 3803(b) Where required. All buildings three or more stories in height, shall be equipped with one or more Fire Department Standpipes.

Section 3803(c) Location. There shall be one Fire Department Standpipe outlet connection located at every floor level landing above the first floor of every required enclosed stairway or smokeproof enclosure. Outlets at enclosed stairways shall be located within the enclosure. No point within a building requiring Fire Department Standpipes shall be more than 130 feet travel distance from a Fire Department Standpipe outlet connection.

Section 3803(c) continued next page.

Section 3803(c) continued:

Portions of Fire Department Standpipe systems not located within an enclosed stairway or smokeproof enclosure shall be protected by a degree of fire resistance equal to that required for vertical enclosures in the building in which they are located.

Section 3803(d) of the UBC is amended to read as follows:

Section 3803(d) Detailed Requirements.

1. Construction. Fittings and connections shall be of sufficient strength to withstand 300 pounds per square inch of water pressure when ready for service. All Fire Department Standpipes shall be tested hydrostatically to withstand not less than 200 pounds per square inch of pressure for two hours, but in no case shall the pressure be less than 50 pounds per square inch above the maximum working pressure.

Section 3803(d) 3. Size. The size of the standpipe shall conform to Chapter 2 of NFPA No. 14 - 1973 Edition.

Section 3803(d) 4. Fire Department Connections. All Fire Department Standpipes shall be equipped with a two-way siamese fire department connection. Fire Department connections shall be interconnected in the system and shall be located on a street front, not less than 18 inches nor more than 4 feet above grade and shall be eqipped with an approved straightway check valve and substantial plugs or caps. All fire department connections shall be protected against mechanical injury and shall be visible and accessible. More than one fire department connection may be required.

Section 3803(d) 5. Outlets. Each standpipe shall be equipped with an approved 2 1/2 inch Outlet not less than 2 feet nor more than 4 feet above the floor level of each story. All Fire Department Standpipes shall be equipped with a two-way, 2 1/2 inch outlet above the roof line of the building when the roof has a pitch of less than 4 inches in 12 inches and installed in a stairway or heated location. All outlets shall be installed so that a 12 inch long wrench may be used in connecting the hose with clearance for the wrench on all sides of the outlet. Standpipes located in smokeproof enclosures shall have outlets located in the vestibule or on the balcony. Standpipe outlets in stairway enclosures or smoke towers shall be so located that the exit doors do not interfere with the use of the outlet. All outlets shall be equipped with an approved valve, cap and chains.

Section 3803(d) continued next page.

Section 3803(d) continued:

Section 3803(d) 6. Water Supply. The standpipe system shall deliver a water supply as required by Chapter 5, Water Supplies, NFPA No. 14 - 1973.

Section 3803 has been amended to add a new subsection as follows:

Section 3803(e) Dry Standpipes, when approved by the Fire Chief, may be installed in lieu of Fire Department Standpipes and shall conform to Section 3803 unamended of the UBC 197- Edition.

Section 3804(b) of the UBC is amended to read as follows:

Section 3804(b) Where Required. Wet Standpipes extending from the cellar or basement into the topmost story shall be provided in Groups A and B, Division 1 and 2 Occupancies with an occupant load exceeding 1,000: in Groups D, E, F, and G Occupancies three or more stories in height; and in Groups E and F Occupancies having a floor area exceeding 20,000 square feet per floor.

EXCEPTION 1: Wet Standpipes are not required in buildings equipped throughout with an automatic fire-extinguishing system.

EXCEPTION 2: Wet Standpipes are not required in basements or cellars equipped with a complete automatic fire-extinguishing system.

EXCEPTION 3: Wet Standpipes shall not be required in assembly areas used solely for worship.

Section 3801(c), Section 3802(d), Section 3803(a) 3803(b) 3803(c) 3803(d) 3803(e) and Section 3804(b) of the UBC are adopted to recognize current use and practice by Minnesota Fire Service and to incorporate the national standards of NFPA and the installation of automatic fire extinguishing systems including sprinkler systems and standpipes.

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

Section 4701(a) General. The installation of lath, plaster and gypsum wallboard shall be done in a manner and with materials as specified in this Chapter, or as set forth in ANSI A42,2, 1971 Specifications for Portland Cement and Portland Cement-Lime Plastering, Exterior (Stucco) and Interior and ANSI A 42, 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 shall comply with the provisions of Chapter 43.

Section 4701 (a) continued next page.

Section 4701(a) continued:

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

Section 4701(a) of the UBC is adopted in order to conform with the latest edition of interior finishing standards.

Sections 5001 through 5006 of the UBC are deleted and replaced by SBC 301 through 337.

UBC Appendix has been amended to read as follows:

> UBC Appendix - the following Chapters are Mandatory:
>
> 23, and 35.
>
> (Note: Appendices 13 and 70 were deleted by action taken in SBC 110 - No. 2)

Sections 5001 through 5006 of the UBC are adopted to up-date basic Code standards setting forth the breadth and application of the State Building Code and clarify which Building Code appendices are mandatory and which are optional.

SBC 202 Mechanical Code has been amended to read as follows:

SBC 202 Mechanical Code. All references in the Uniform Building Code to the Uniform Mechanical Code, shall be referred to and regulated by the Minnesota Heating, Ventilating, Air Conditioning and Refrigeration Code.

SBC 202 is adopted to clarify which Code is to be used for mechanical installations.

SBC 203 - Adoption of Flood Proofing Regulations by Reference has been amended to read as follows:

Flood-Proofing Regulations, as promulgated by the Office of the Chief of Engineers, U.S. Army, June, 1972, is hereby adopted by reference and made a part of the State Building Code, subject to the following amendments:

(Sections 201.2 through 208.2 are placed in the appendix of this Code)

Section 200.2 is amended to read as follows:

Section 200.2 Official Flood Plain Zoning Map: The Official Flood Plain Zoning Map showing the extent and boundaries of the Primary and Secondary Flood Hazard Areas is hereby declared and established as a part of these Regulations. Hereinafter reference to the term Primary Flood Hazard Areas in these regulations shall be synonymous with the term "flood plain areas" as used in Minnesota Regulations NR 85-93.

Section 200.3 is amended to read as follows:

Section 200.3 Regulatory Flood Datum: For the purpose of these regulations, the Regulatory Flood Datum, or as hereinafter referred to as the "RFD", is hereby declared and established for use as the reference datum for determining the elevation above mean sea level to which flood-proofing protection shall be provided.

Section 200.3 continued next page.

Section 200.3 Flood Proofing Regulations continued:

Section 200.3 Hereinafter reference to the term "Regulatory Flood Datum" in these regulations shall be synonymous with the term "flood protection elevation" as used in Minnesota Regulations NR 85-93

Section 201.1 is amended to read as follows:

Section 201.1 Application: These Regulations shall apply to the construction, alteration, and repair of any building or parts of a building or structure in the Flood Hazard Area(s) of the municipalities. Additions, alterations, repairs, and changes of use or occupancy shall comply with all provisions for new buildings and structures as otherwise required in the Building Code, except as specifically provided in these Regulations.

Section 201.2 is amended to read as follows:

Section 201.2 Nonconforming Use: A structure or the use of a structure or premises which was lawful before the passage or amendment of the ordinance but which is not in conformity with the provisions of these Regulations may be continued subject to the following conditions:

1. No such use shall be expanded, changed, enlarged or altered in a way which increases its nonconformity.

2. No structural alteration, addition, or repair to any conforming structure over the life of the structure shall exceed 50 per cent of its value at the time of its becoming a nonconforming use, unless the structure is permanently changed to a conforming use.

3. If such use is discontinued for 12 consecutive months, any future use of the building premises shall conform to these Regulations. The assessor shall notify the zoning administrator in writing of instances of nonconforming uses which have been discontinued for a period of 12 months.

4. If any nonconforming use or structure is destroyed by any means, including floods, to an extent of 50 per cent or more of its assessed value, it shall not be reconstructed except in conformance with the provisions of these Regulations; provided, the Board of Appeals may permit reconstruction if the use or structure is located outside the floodway and is adequately and safely flood-proofed, elevated, or otherwise protected in conformance with these Regulations.

5. Uses or adjuncts thereof which are or become nuisances shall not be entitled to continue as nonconforming uses.

6. Except as provided in "The Building Code", any use which has been permitted as a special exception shall not be deemed a nonconforming use but shall be considered a conforming use.

Section 201.2 continued next page.

Section 201.2 Flood Proofing Regulations continued:

7. Any alteration, addition, or repair to any nonconforming structure which would result in substantially increasing its flood damage or flood hazard potential shall be protected as required by these Regulations.

8. The Building Official shall maintain a list of nonconforming uses including the date of becoming nonconforming, assessed value at the time of its becoming a nonconforming use, and the nature and extent of nonconformity. This list shall be brought up-to-date annually.

9. The Building Official shall prepare a list of those nonconforming uses which have been flood-proofed or otherwise protected in conformance with these Regulations. He shall present such list to the Board of Appeals which may issue a certificate to the owner stating that such uses, as a result of these corrective measures, are in conformance with these Regulations.

Section 203.3 is amended to read as follows:

Section 203.3 Records: Copies of such tests reports, certifications, or the results of such tests shall be kept on file in the office of the Building Official for a period of not less than two (2) years after the approval and acceptance of the completed structure for beneficial occupancy.

Section 204.6 is amended to read as follows:

Section 204.6 Board of Appeals: In order to determine the suitability of alternate materials and methods of construction and to provide reasonable interpretations of the provisions herein, there shall be and is hereby created a Board of Appeals of five (5) members. Each member of the Board shall be a licensed professional architect or engineer, or a builder or superintendent of building construction, with at least ten years experience, for five years of which he shall have been in responsible charge of work. At no time shall there be more than two members from the same profession. At least one of the members shall be a licensed structural or civil engineer with architectural engineering experience. The Board shall adopt reasonable rules for its investigations and shall render written decisions to the Building Official.

Section 204.7 is amended to read as follows:

Section 204.7 Validity: It shall be unlawful for any person, firm or corporation or agency (State or local) to erect, construct, enlarge, alter repair, move, improve, remove, convert, or demolish, any building or structure in the Flood Hazard Area(s), or cause the same to be done, contrary to or in violation of any of the provisions of these Regulations and/or "The Building Code".

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 205.1 is amended to read as follows:

Section 205.1 Statement of Intention to Improve: The Owner or any registered architect or licensed professional engineer authorized to represent the Owner shall, before preparing final plans for any improvement in the Flood Hazard Area(s), file with the Building Official a Statement of Intention to Improve, including a brief description of the type of improvement being considered and giving its precise location, on a form provided by the Building Official. The Building Official shall note on two copies the elevation of the RFD at the location of the proposed improvement. One copy of the Statement of Intention to Improve shall be retained by the Building Official until a permit for improvement on the site is approved or one year has elapsed; a second copy shall be returned to the Owner for his use in final siting and design of his improvement. Assignments of the RFD elevations at all locations shall be made from profiles and/or cross sections provided by the Army Corps of Engineers, SCS, USGS . This information shall be open to public examination at all reasonable times.

Section 205.2 is amended to read as follows:

Section 205.2 Permits Required: No person, firm or corporation shall erect, construct, enlarge, alter, repair, move, remove, convert, or demolish any building or structure or any part thereof, or make any other improvement within the Flood Hazard Area(s), or cause same to be done, without first obtaining a separate building flood proofing permit for any such improvement from the Building Official. Ordinary minor repairs may be made with the approval of the Building Official without a permit, provided that such repairs shall not violate any provisions of these Regulations or of "The Building Code".

Section 205.3 (2) is amended to read as follows:

Section 205.3:
(2) Two (2) sets of complete plans and specifications, in addition to plans and specifications required by "The Building Code", except that plans and specifications for any and all proposed improvements in the primary Flood Hazard Area(s) shall be prepared by an engineer or architect licensed by the State to practice as such. All drawings and specifications shall bear the name of the author thereof in his true name, followed by such title as he may be lawfully authorized to use. All plans and sections shall be noted with the proposed flood-proofing class of each space below the RFD including detail drawings of walls and wall openings.

Section 205.3 (3) is amended to read as follows:

Section 205.3
(3) Two (2) copies of the Owner's Contingency Plan, which shall describe in detail all procedures for temporary placement and removal or contingent protection proposed for items in spaces affected by these Regulations including:

Section 205.3 continued next page.

Section 205.3 Flood Proofing Regulations continued:

Section 205.3 (3)

(a) Plans and schedules for items to be removed and locations of placed above the RFD to which they will be removed if these contents violate restrictions associated with the flood-proofing class of the space in which they are placed temporarily, including specific organizational responsibilities for accomplishing this removal.

(b) Procedures, materials and equipment for protecting items required to have protection by their flood-proofing class, but for which this protection is proposed to be provided contingently, including specific organizational responsibilities for accomplishing this protection.

Waivers of restrictions implicitly requested by submission of the Owner's Contingency Plan may be granted by the Building Official as provided by 1101.2

Section 209.1 is amended to read as follows:

Section 209.1 New Building and Structures: Every building or structure hereafter erected, that is located in the primary Flood Hazard Area(s) where the ground surface is two (2) feet or more below the RFD, or where flood water velocities may exceed five (5) feet per second, shall be provided with an inclosed refuge space above the RFD of sufficient area to provide for the occupancy load with a minimum of 12 square feet per person. It shall be provided with one or more exits through the exterior walls above the RFD to an exterior platform and stairway not less than three (3) feet wide.

Section 209.3 is amended to read as follows:

Section 209.3 Use of Space Below the Regulatory Flood Datum: No floor level or portion of the building or structure that is below the RFD regardless of structure or space classification shall be used for human occupancy, or for storage of any property, materials, or equipment that might constitute a safety hazard when contacted by flood waters.

Section 210.7 is amended to read as follows:

Section 210.7 Placard Types: Placards shall be white rigid plastic or other non-water susceptible material eight (8) inches long and twelve (12) inches wide, and shall have printed thereon in black letters the information shown in Figure 2.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 300.0 is amended by adding a subsection to read as follows:

Section 300.2 Interpretation: For the purpose of these regulations, where definition of terms as set forth in this Chapter conflict in meaning with those as set forth in Minn. Regs. NR 85(c), the latter shall take precedence.

Section 301.2.9 is amended to read as follows:

Section 301.2.9 Habitable Room: A space used for living, sleeping, eating or cooking, or combination thereof, but not including bathrooms, toilet compartments, closets, halls, storage rooms, laundry and utility rooms, cellars and similar spaces.

Section 301.4.1 is amended to read as follows:

Section 301.4.1 Building Code: The State Building Code setting forth standards for the construction, addition, modification and repair of buildings and other structures for the purpose of protectecting the health, safety, and general welfare of the public.

Section 402.1 (Table 2) is amended to read as follows:

Section 402.1 General: Table 2 indicates the various degrees of protection required to permit uses of spaces for each flood-proofing class. Although spaces must meet the requirements shown for each element of flood-proofing, the chart in itself shall not be construed as being exhaustive with respect to all requirements imposed by these Regulations. In disputes arising over the interpretation of this chart, the written provisions of these Regulations shall be considered as definitive.

Table 2

SPACE CLASSIFICATION CHART

FLOOD-PROOFING CLASSIFICATION OF SPACES									
Flood-Proofing Classes	MINIMUM REQUIREMENTS								
	Water-Proofing	Structural Loads	Closure of Openings	Internal Flooding & Drainage	Flooring	Walls and Ceilings	Contents	Electrical	Mechanical
W1 Completely Dry	Type A	Class 1	Type 1	See Chapter 8	Class 1	Class 1	Class 1	See Chapter 12	See Chapter 13
W2 Essentially Dry	Type B	Class 1	Type 1		Class 2	Class 2	Class 2		
W3 Flooded with Potable Water	Type A	Class 2	Type 3		Class 3	Class 3	Class 3		
W4 Flooded with Flood Water	Type C	Class 3	Type 4		Class 4	Class 4	Class 4		
W5 Non-Flood-Proofing	—	—	Type 5		Class 5	Class 5	Class 5		

Flood Proofing Regulations continued next page.

Flood Proofing Regulations continued:

Section 612.2.1 is amended to read as follows:

Section 612.2.1 Natural Terrain: In addition to the requirements of "The Building Code", the building shall be located not less than fifteen (15) feet back from the line of incidence of the RFD on the ground, foundation design shall take into consideration the effects of soil saturation on the performance of the foundation, the effects of flood waters on slope stability shall be investigated, normal access to the building shall be by direct connections with areas above the RFD and all utility service lines shall be designed and constructed as required to protect the building and/or its components from damage or failure during a flooding event to the RFD.

Section 612.2.2 is amended to read as follows:

Section 612.2.2 Building on Fill: The building and all parts thereof may be constructed above the RFD on an earth fill. Prior to placement of any fill or embankment materials, the area upon which fill is to be placed, including a five-foot strip measured horizontally beyond and contiguous to the toe line of the fill, shall be cleared of standing trees and snags, stumps, brush, down timber, logs and other growth, and all objects including structures on and above the ground surface or partially buried. The area shall be stripped of topsoil and all other material which is considered unsuitable by the Building Official as foundation material. All combustible and noncombustible materials and debris from the clearing, grubbing and stripping operations shall be removed from the proposed fill area and disposed of at locations above the RFD and/or in the manner approved by the Building Official. Fill material shall be of a selected type, preferably granular and free-graining, placed in compacted layers. Fill selection and placement shall recognize the effects of saturation from flood waters on slope stability, uniform and differential settlement, and scour potential. The minimum elevation of the top slope for the fill section shall be no more than one foot below the RFD. Minimum distance from any point of the building perimeter to the top of the fill slope shall be either fifteen (15) feet or twice the depth of fill at that point, whichever is the greater distance. This requirement does not apply to roadways, driveways, playgrounds, and other related features which are not integral and functional parts of the building proper. Fill slopes for granular materials shall be no steeper than one vertical on one and one-half horizontal, unless substantiating data justifying steeper slopes are submitted to the Building Official and approved. For slopes exposed to flood velocities of less than five (5) feet per second, grass or vine cover, weeds, bushes and similar vegetation undergrowth will be considered to provide adequate scour protection. For higher velocities, stone or rock slope protection shall be provided.

Section 802.1 is amended to read as follows:

Section 802.1 Applicability: Spaces to be intentionally flooded with flood water (W4) shall be provided with the necessary equipment, devices, piping, controls, etc. necessary for automatic flooding during the flood event and drainage of the space(s) when flood waters recede.

Section 802.1 continued next page.

Section 802.1 continued:

The automatic flooding and drainage system(s) shall utilize approved piping materials and have sufficient capacity for raising or lowering the internal water level at a rate comparable to the anticipated rate of rise and fall of a flood that would reach the RFD. These pipe systems shall be directly connected to the external flood waters to maintain a balanced internal and external water pressure condition. Provisions shall be made for filling the lower portions of the structure first and for interconnections through or around all floors and partitions to prevent unbalanced filling of chambers or parts within the structures. All spaces below the RFD, shall be provided with air vents extending to at least three(3) feet above the elevation of the RFD to prevent the trapping of air by the rising water surface. All openings to the filling and drainage systems shall be protected by screens or grills to prevent the entry or nesting of rodents or birds in the system.

Section 1301.2.1 is amended to read as follows:

Section 1301.2.1 Heating systems utilizing gas or oil fired furnaces shall have a float operated automatic control valve installed in the fuel supply line which shall be set to operate when flood waters reach an elevation equal to the floor level of the space where furnace equipment is installed. A manually operated gate valve that can be operated from a location above the RFD shall be provided in the fuel supply line to serve as a supplementary safety provision for fuel cutoff. The heating equipment and fuel storage tanks shall be mounted on and securely anchored to a foundation pad or pads of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. As an alternate means of protection, elevation of heating equipment and fuel storage tanks above the RFD on platforms or by suspension from overhead structural systems will be permitted. All unfired pressure vessels will be accorded similar treatment. Fuel lines shall be attached to furnaces by means of flexible or swing type couplings. All heating equipment and fuel storage tanks shall be vented to an elevation of at least three (3) feet above the RFD. Air supply for combustion shall be furnished if required for systems installed in W1 or W2 spaces, and piping or duct work for such purpose shall be terminated at least three (3) feet above the RFD.

Section 1302.2.2 is amended to read as follows:

Section 1302.2.2 Where the state of dryness of a space is dependent on a sump pump system, or where the stability of a structure during a flood event depends on the relief of up-lift pressures on building components, all interior storm water drainage or seepage, appliance drainage, and underslab drain tile systems shall be directly connected to a sump(pump) and discharged at an elevation at least three(3) feet above the RFD.

Section 1302.2.3.1 is amended to read as follows:

Section 1302.2.3.1 All vents shall extend to an elevation of at least three (3) feet above the RFD.

Flood Proofing Regulations continued next page.

Flood Proofing Regulations Continued:

Section 1302.3 is amended to read as follows:

Section 1302.3 Sewage Disposal/Treatment. Individual sewage disposal and/or treatment facilities will be permitted in a Flood Hazard Area but only at locations where connection with a public sewer system is not possible or feasible. Such facilities shall conform to applicable standards, criteria, rules and regulations of the Minnesota Department of Health and Pollution Control Agency in terms of size, construction, use and maintenance and with standards and criteria of the Minnesota Department of Natural Resources regarding setbacks from the normal high water mark of a water-course in accordance with the public water classification. Installations in low swampy areas or areas where the highest known ground water table is within four feet of the bottom of the soil absorption system or which may be subject to recurrent flooding will not be permitted.

Section 1302.3.1 regarding cesspools/sewage disposals has been amended by deleting this Section in its entirety.

Section 1302.3.2 regarding seepage pits has been amended by deleting this Section in its entirety.

Section 1302.4.1 is amended to read as follows:

Section 1302.4.1 Water supply wells, tanks, filters, softeners, heaters, and all appliances located below the RFD shall be protected against contamination by covers, walls, copings, or castings. All vents shall be extended to a minimum elevation of three (3) feet above the RFD.

SBC 203 - Adoption of Flood Proofing Regulations - is adopted to correlate and coordinate Building Code requirements with the requirements as set forth by the Minnesota Department of Natural Resources and in conformance with State Law.

ELEVATORS, DUMBWAITERS, ESCALATORS, MANLIFTS, MOVING WALKS, HOISTS AND LIFTS

SBC 8801 Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts. General. Elevators, dumbwaiters, escalators, manlifts, moving walks, hoists and lifts shall be designed, constructed, installed and maintained so as to be reasonalby safe to life, limb and adjoining property.

SBC 8802 Definitions. For the purpose of this chapter, the terms or words listed below shall have the meaning indicated:

EXISTING INSTALLATION.	Shall mean an installation on which the construction or installation was begun prior to the effective date of this Code.
NEW INSTALLATION.	Shall mean an installation on which the construction or installation was begun subsequent to the effective date of this Code.

Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists, Lifts
continued next page.

Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts continued:

SBC 8803 Existing Installations is amended to read as follows:

1. All existing installations may be continued in service as long as they are properly maintained and are, in the opinion of the administrative authority, installed and maintained in a safe condition. The Administrative Authority may order the installation of car gates, car tops, and the car walls extended to the car top on all existing installations. The administrative authority shall have the authority to shut down any piece of equipment covered by this chapter, which in his opinion is dangerous to life, limb, and adjoining property, and such equipment shall not be put back into operation until such unsafe condition has been corrected and approved by the Administrative Authority.

SBC 8803 No. 2 (Numbering has been editorially changed)

2. Any installation which is materially changed subsequent to the date of enactment of this Code shall comply with all of the requirements covering a new installation.

   A material change shall be defined as any change which moves the location, increases or decreases the length of travel, changes the type of operation, increases the speed or carrying capacity or changes the types of power supply of an existing installation.

   Any installation, whether new or existing, which shall become damaged, defective or worn by fire or other causes including ordinary wear to such an extent that, in the opinion of the administrative authority it becomes dangerous to life, limb and adjoining property, such installations shall be repaired or rebuilt in conformity with the provisions of this chapter for new installations. Such equipment shall, if in the opinion of the administrative authority, it is found necessary to protect life, limb and property, be taken out of service until such unsafe condition has been removed.

SBC 8804 - Inspections, Tests and Approval is amended to read as follows:

SBC 8804 No. 1 (Numbering has been editorially changed)

1. Approval of Plans. Any person, firm or corporation desiring to install, relocate, alter materially or extend any installation covered by this chapter shall be required to obtain approval for so doing from the administrative authority. Two sets of drawings and specifications showing such installations, relocation, alteration or extension shall be submitted for approval.

SBC 8804 continued next page.

SBC 8804 continued:

SBC 8804 - No. 2 - has been amended to read as follows:

2. Inspections and Tests. It shall be unlawful for any person, firm or corporation to put into service any installation covered by this chapter whether such installation is newly installed, relocated or altered materially without such installation being inspected and approved by the administrative authority. The installer of any equipment included in this chapter shall notify the administrative authority seven days prior to completion of the installation for such inspection. The administrative authority shall have the authority to require such tests as provided in ANSI A17.1 - 1971 Edition and Supplements as he may deem necessary to prove the safe operation of any installation.

SBC 8804 - No. 3 (Numbering has been editorially changed)

3. Approval. A certificate or letter of approval shall be issued by the administrative authority for such installation when the entire installation is completed in conformity with this chapter. The entire installation shall include all enclosures or shafts, gates, doors, machinery safety and control devices and all other appurtenances necessary.

SBC 8805 - No. 1 (Numbering has been editorially changed)

1. To be Reported. The owner or person in control of an elevator or other installation covered by this chapter shall promptly notify the administrative authority of any accident to a person or apparatus, on, about, or in connection with such elevator or other installation, and shall afford the administrative authority every facility for investigating such accident and the damage resulting therefrom. Notification may be given to the administrative authority by telephone or verbally, but such notification shall be confirmed in writing.

SBC 8805 - No. 2 (Numbering has been editorially changed)

2. Investigation. The administrative authority shall make or cause to be made an investigation and the report of such investigation shall be placed on file in his office. Such report shall give in detail the cause or causes, so far as they can determine, and such report shall be open to public inspection.

SBC 8805 - No. 3 (Numbering has been editorially changed)

3. Operation Discontinued. When an accident involved the failure or destruction of a part of the installation or the operating mechanism, the elevator or other installation shall be taken out of service and shall not be used again until it has been made safe and such re-use approved by the administrative authority.

SBC 8805 - No. 3 continued next page.

SBC 8805 - No. 3 continued:

The administrative authority may, if deemed necessary, order the discontinuance of operation of any such elevator or installation until a new certificate of approval has been issued.

SBC 8805 - No. 4 (Numbering has been editorially changed)

4. Removal of Parts Restricted. No part of the damaged installation, construction or operating mechanism shall be removed from the premises until permission is granted by the administrative authority.

SBC 8806 Elevators, Dumbwaiters, Escalators and Moving Walks has been amended as follows:

SBC 8806 - No. 1 has been editorially numbered and amended to read as follows:

1. The eighth edition of American National Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks - ANSI A17.1 - 1971, including supplements A17.1(a) - 1972 and A17.1(b), as amended herein, are hereby incorporated by reference and made a part of this Code.

   All references in ANSI A17.1 - 1971 to the National Electrical Code ANSI C1 - 1968 shall be changed to read, "National Electrical Code, ANSI C1 - 1971 (NFPA 70-1971)."

SBC 8806 - No. 2 has been editorially numbered and amended to read as follows:

SBC 8806 - No. 2 is amended to include (e), (f)... (f - 1, 2, 3a, b), (g) (h) (i) (j) (k) (l) (m) (n) and (o):

2. Exceptions and Amendments to ANSI A17.1:

   (a) Winding drum machine. Winding drum machine shall not be permitted on new elevator installations nor replacements on existing installation.

   (b) Swing doors. Horizontal swing doors, either single section or center opening two section, shall not be permitted on new elevator installations nor as replacements on existing installations, except the administrative authority may approve such installation if the conditions are such as to make it impossible to install other than swing doors.

   (c) Side Exits. Side emergency exits on elevator car shall not be permitted.

   (d) Solid Bumpers. Solid bumpers shall not be permitted on new installations nor as a replacement on existing installations.

   (e) Clearances. The minimum pit depth shall be not less than three (3) feet. Overhead clearance shall be not less than two (2) feet with piston in stop ring and in no case less than three (3) feet when car is leveled at top landing.

SBC 8806 - No. 2 continued next page.

SBC 8806 - No. 2 continued:

(f) Door Unlocking Devices. Hoistway door unlocking devices shall not be permitted except at the bottom landings.

1. Top and bottom landings shall be provided with hoistway access switches conforming to rule 111.9b and 111.9c of ANSI A17.1971.

2. The door at the lowest landing shall be provided with a special key not easily duplicated and said key shall be available only to elevator mechanics and inspectors. The interlocks shall be designed and adjusted as to prevent movement of the car until after the door is closed and in the locking position.

3. Access to Hoistways for Emergency Purposes.

a. The elevator shall have hoistway doors which are unlocked when closed with the car at floor, or locked but openable from landing by means effective only when car is in landing zone.

b. The operating means for unlocking the doors shall be kept on the premises by the person responsible for the maintenance and operation of the elevators in a location readily accessible to qualified persons in case of an emergency but where they are not accessible to the general public.

(g) Elevator doors shall provide a clear opening of at least 32 inches.

(h) Automatic closing doors shall have a closing interval of not less than three (3) seconds except center opening horizontal sliding doors.

(i) At least one elevator must be provided for fire department emergency access to all floors. Said elevator cab shall be of such size to accommodate an ambulance cot in its horizontal open position, minimum inside clear platform dimensions of 6'4" X 4'5".

(j) Exterior elevator call buttons shall be placed not higher than 42 inches above the floor. No emergency stop switch, door opening and door closing buttons, or elevator floor selector buttons shall be placed higher than 48 inches above the floor.

(k) Standby Power. In every building over one story and more than 75 feet in height, emergency power shall be provided for at least one elevator in each bank. This emerbency power shall be automatically transferable to any other elevator in the bank and shall be capable of operating the elevator with a full load at contract speed of not less than 150 feet per minute. Emergency power shall be provided by an approved self-contained generator set to operate whenever there is a loss of power in the normal power supply. The generator shall be in a separate room having at least a one-hour fire resistive occupancy separation from the remainder of the building and shall have a fuel supply adequate to operate the equipment for two hours. See UBC Standards 18-1.

(l) Emergency Communications. Every elevator car shall be provided with a two-way communication system connected to an approved emergency service which operates 24 hours every day.

SBC 8806 - No. 2 continued next page.

SBC 8806 - No. 2 continued:

(m) Operating Devices. All operating devices shall be of the enclosed electric type. Rope or rod operated devices activated by hand, or rope operating devides activated by wheels, levers or cranks, shall be removed.

EXCEPTION: This shall not be considered a material change.

(n) Unsafe Conditions. When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the Administrative Authority a full and true report of such inspection and such unsafe condition. If the Administrative Authority finds that the unsafe condition endangers human life, he shall cause to be placed on such elevator, escalator or moving walk in a conspicuous place, a notice stating that such conveyance is unsafe. The owner shall see to it that such notice of unsafe condition is legibly maintained where placed by the Administrative Authority. The Administrative Authority shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance which are necessary to render it safe, and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only by the Administrative Authority when he is satisfied that the unsafe conditions have been corrected.

(o) A guarded light and convenience outlet shall be provided on the top and underside of each elevator car.

SBC 8806 No. 3 (Numbering has been editorially changed)

3. Limited Use of an Elevator. When a building or structure is to be equipped with one or more elevators, at least one of such elevators may be approved for limited use prior to the completion of the building or structure.

The use of such elevators may be permitted by the administrative authority under the authority of a limited permit issued by him for each class of service. Such limited permit shall specify the class of service. Such limited permit shall specify the class of service permitted and it shall not be issued until the elevator has been tested with rated load and the car safety and terminal stopping equipment have been tested to determine the safety of the equipment and until permanent or temporary guards or enclosures are placed on the car and around the hoistway and at the landing entrance on each floor. Landing entrance guards shall be provided with locks that can be released from the hoistway side only. Automatic and continuous pressure elevators shall not be placed in temporary operation from the landing push buttons unless door locking devices and/or interlocks are installed and operative.

SBC 8806 continued next page.

SBC 8806 - No. 4 has been editorially numbered and amended to read as follows:

4. Access to Elevator Pits. A pit ladder shall be provided for each elevator in all pits where access is from the bottom landing. Access to elevator pits which extend more than eighteen (18) inches below the sill of the pit access door shall have a pit ladder as required.

SBC 8806 - No. 5 has been editorially numbered and amended to read as follows:

5. Dumbwaiters and Handpowered Elevators. All dumbwaiters and handpowered elevators shall be equipped with a broken rope safety device.

SBC 8806 - No. 6 has been editorially numbered and amended to read as follows:

6. Car Safety Mechanism Switch. Car safety mechanism switches shall be of the manually reset type.

SBC 8806 - No. 7 has been editorially numbered and amended to read as follows:

7. Hoistway Door Protection in Passenger Elevators. Hoistway doors on all passenger elevators shall not be solely dependent upon the door edge re-opening device for protection from the doors closing on an obstruction, but shall also be provided with an approved light beam or electronic door protection device.

SBC 8806 - No. 8 has been editorially numbered and amended to read as follows:

8. Emergency Elevators. All keyed switches installed to operate elevators on emergency service will be required to be keyed alike to a pattern approved by the Administrative Authority. In lieu of the above, keys for emergency elevator service may be in a metal box placed in a location approved by the Administrative Authority, provided said box is locked with a 5 pin tumbler core lock or equivalent which is keyed to the same pattern.

SBC 8806 has been amended to include SBC 8806 - No. 9 - subsection (g) to read as follows:

9. Amendment to ANSI Supplement A17.1(b) - 1973 --Rule 211.3a - Automatic-Operation Elevators is amended to add a new subsection (g).

   (g) One (1) car in each bank of automatic-operation elevators serving three (3) or more landings or having a travel distance of twenty-five (25) feet or more shall be provided with emergency service controls as specified in Rule 211.3a of this supplement.

   Rule 211.3a - Reference to NFPA Standard No. 72d shall be the 1972 Edition and NFPA Standard No. 13 shall be the 1973 Edition.

continued next page.

SBC 8809 is amended to read as follows:

SBC 8809 Temporary Interior and Exterior Hoists. Temporary interior and exterior hoists shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property, shall conform to ANSI 10.4 and Regulations of the Department of Labor and Industry.

SBC 8810 is amended to read as follows:

SBC 8810 Mechanized Parking Garage Equipment. Mechanized parking garage equipment shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property, shall conform to the standards specified in the American Standard Safety Code for Mechanized Parking Garage Equipment ANSI A113.1 (R1971).

Section 8801, Section 8803, Section 8804, Section 8805, Section 8806, Section 8809, and Section 8810 of the State Building Code is adopted to provide uniform requirements for elevators with the Department of Labor and Industry and to incorporate the requirements of the State Fire Marshal for handicapped persons. This is also to recognize Chapter 466 of the 1971 Session Laws which make the handicap requirements of the State Fire Marshal' Office applicable on all buildings, except one and two family dwellings and farm buildings and dwellings.

SBC Appendix C is deleted and replaced by the following:

Appendix C: Variations of Snow Loads. The minimum snow loads for the design of both ordinary and multiple series roofs, either flat, pitched or curved, shall be determined by multiplying the appropriate snow load given in Section 2305(c) by the appropriate coefficients Cs (See Figures 1, 2, 3 and 4). The full intensity of the roof snow load shall be applied to any one contiguous portion of the roof area if it produces a more unfavorable effect than the full intensity applied over the entire roof area. The basic snow load coefficient Cs shall be increased or decreased in accordance with the following conditions:

1. Decreases

   (a) A decrease (due to slide-off of snow load) on the horizontal projection of pitched roofs, of one pound per square foot for each degree, by which the slope angle exceeds 20 degrees. In no case shall the allowable design load be less than 20 pounds per square foot.

TABLE OF PITCH VS. DEGREES:

PITCH	DEGREES
2/12	9° - 28'
2½/12	11° - 46'
3/12	14° - 2'
3½/12	16° - 15½'
4/12	18° - 26'
4½/12	20° - 33'
5/12	22° - 37'
5½/12	24° - 37'
6/12	26° - 34'

SBC Appendix C continued next page.

SBC Appendix C continued:

(b) A decrease of 20 per cent of the basic uniform snow load may be used for rounded (arch) roofs with a ratio of rise to span between 1/8 and 3/8. Roofs with rise to span ratio equal to or greater than 3/8, the basic uniform snow load may be reduced 40 per cent. In no case shall the allowable uniform snow load be less than 20 pounds per square foot.

2. Increases. The basic roof loads shall be increased for the following conditions:

(a) Roof Valley Condition in accordance with Figure No. 1 and applicable load cases.

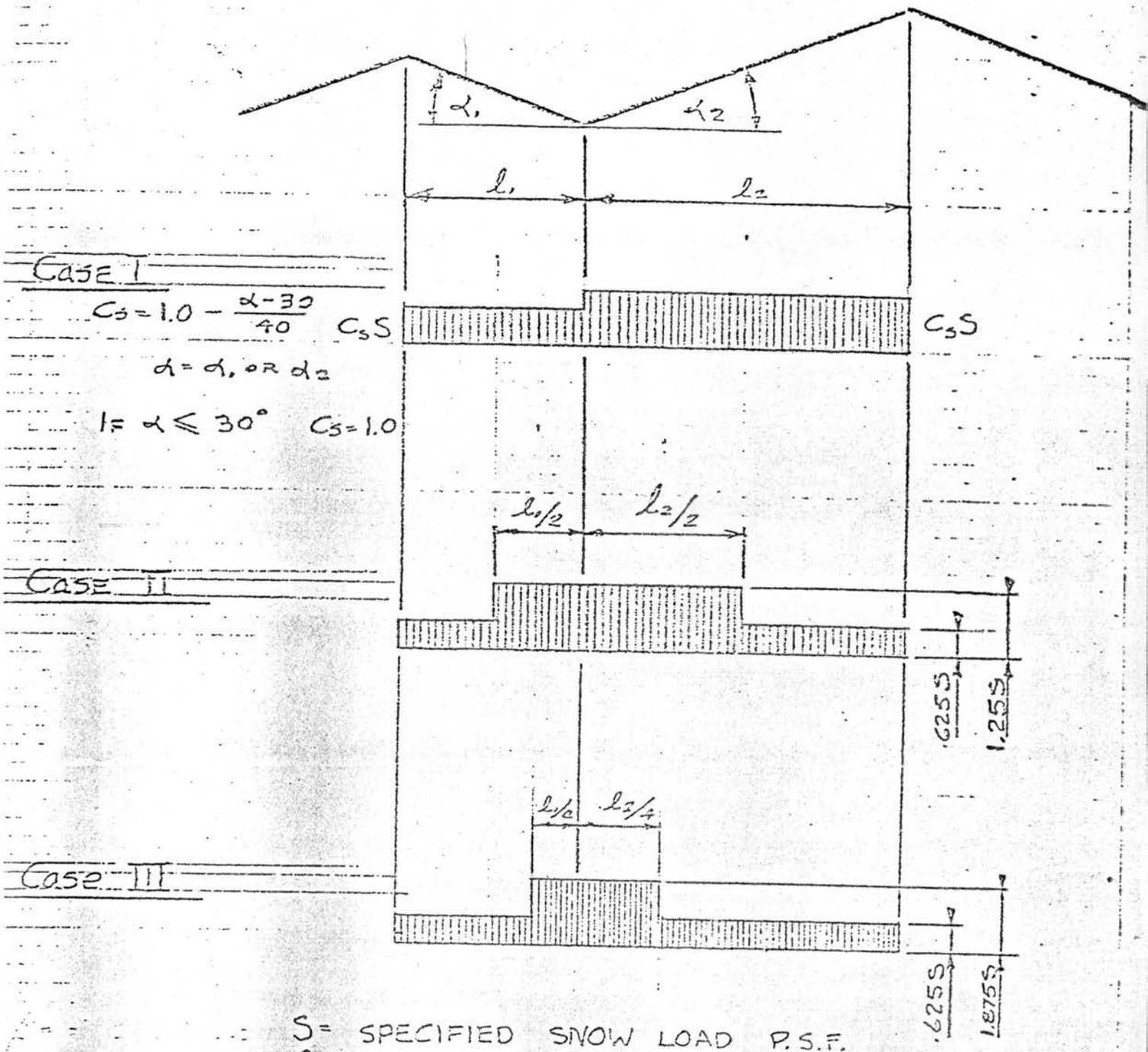
(b) Roof areas abutting bertical walls, of adjacent buildings in accordance with Figure No. 2 and applicable formulas.

(c) Lower level roof areas abutting sloping upper roof areas in accordance with Figure No. 3 and applicable descriptive conditions.

(d) Roof areas adjacent to or containing projections and/or obstructions in accordance with Figure No. 4 and applicable formulas.

Note: Figures No. 1, No. 2, No. 3 and No. 4 attached.

SBC Appendix C is adopted to conform with Section 2305(c).



S = SPECIFIED SNOW LOAD P.S.F.

C_s = COEF. OF INCREASED SNOW LOAD DUE TO LOCATION

$\beta = \frac{\alpha_1 + \alpha_2}{2}$

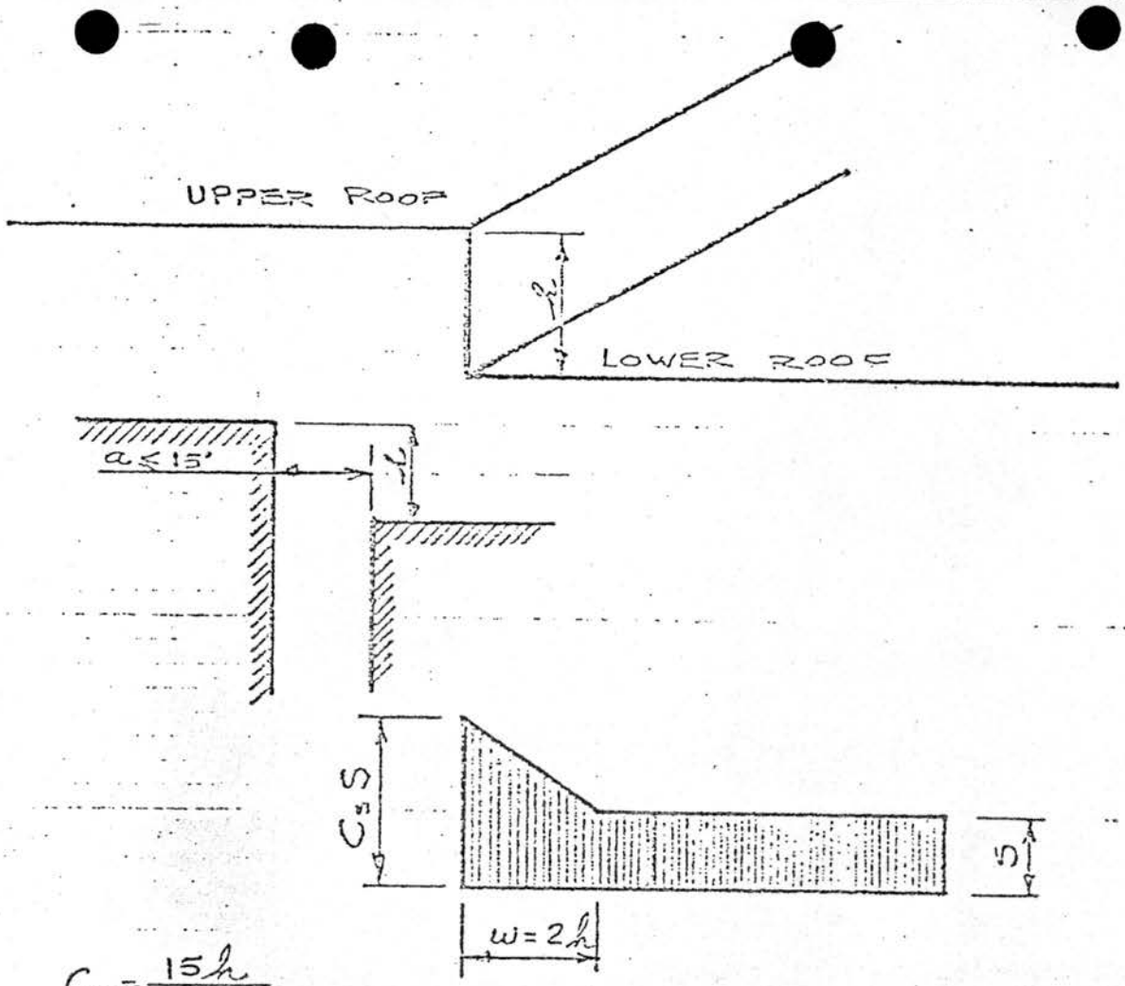
IF $\beta = \leq 10°$ USE CASE I

IF $10° < \beta < 20$ USE CASE I & II

IF $\beta \geq 20°$ USE CASE I, II & III

FIGURE NO. 1

VALLEY AREA OF SLOPED ROOFS



$$C_s = \frac{15h}{S}$$

w (MINIMUM) = 10 FT.
w (MAXIMUM) = 30 FT.

IF $\frac{15h}{S} < 1.0$ $C_s = 1.0$

IF $\frac{15h}{S} > 3.0$ $C_s = 3.0$

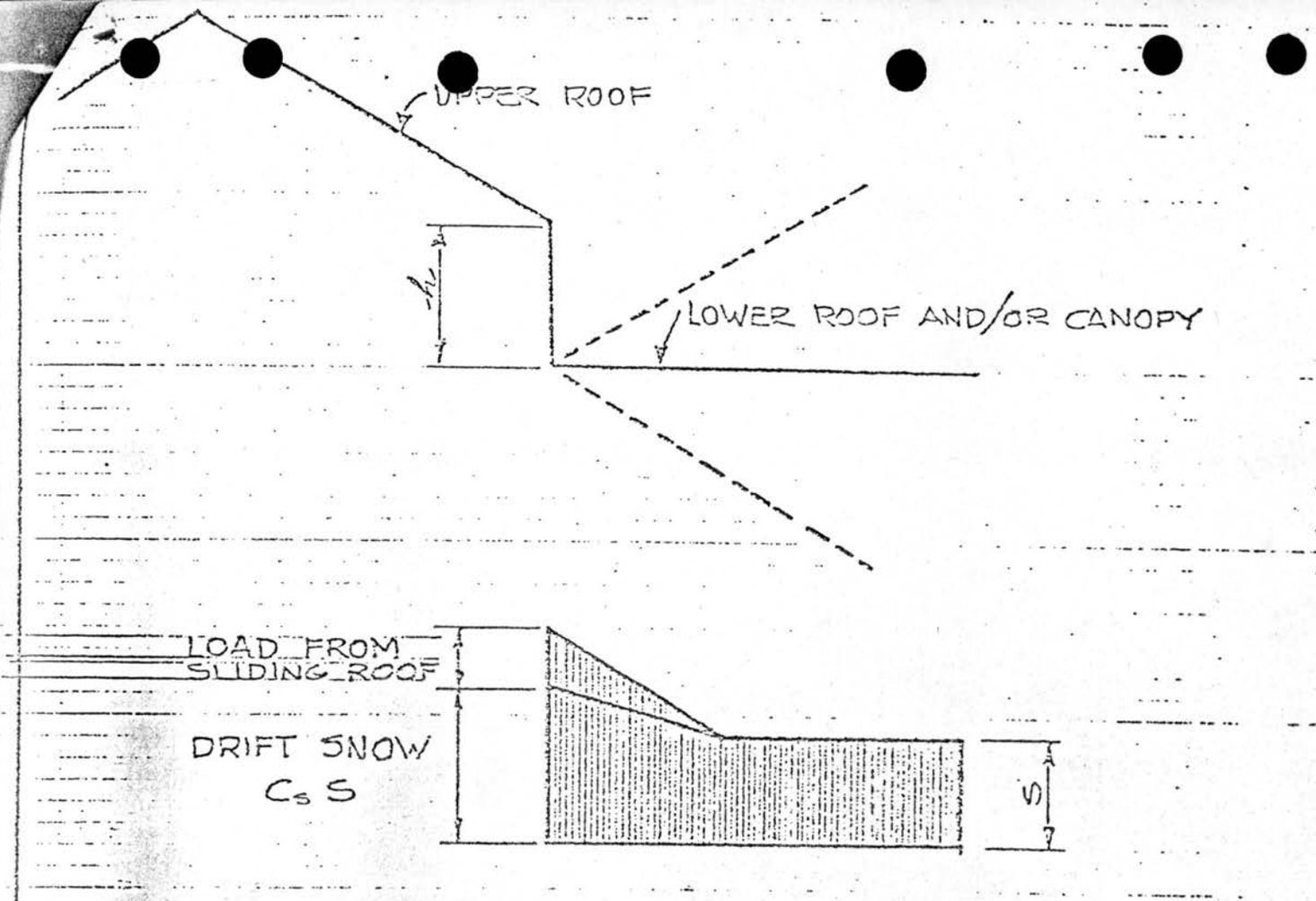
IF $h < 5$ FT. $w = 10$ FT.

IF $h > 15$ FT. $w = 30$ FT.

h = HEIGHT DIFFERENCE IN ROOFS IN FEET
w = WIDTH OF DRIFT IN FEET
a = DISTANCE BETWEEN BUILDINGS IN FEET
S = SPECIFIED SNOW LOAD IN P.S.F.
C_s = COEFFICIENT OF INCREASED SNOW LOAD

FIGURE NO. 2

LOWER LEVEL OF MULTI-LEVEL ROOFS



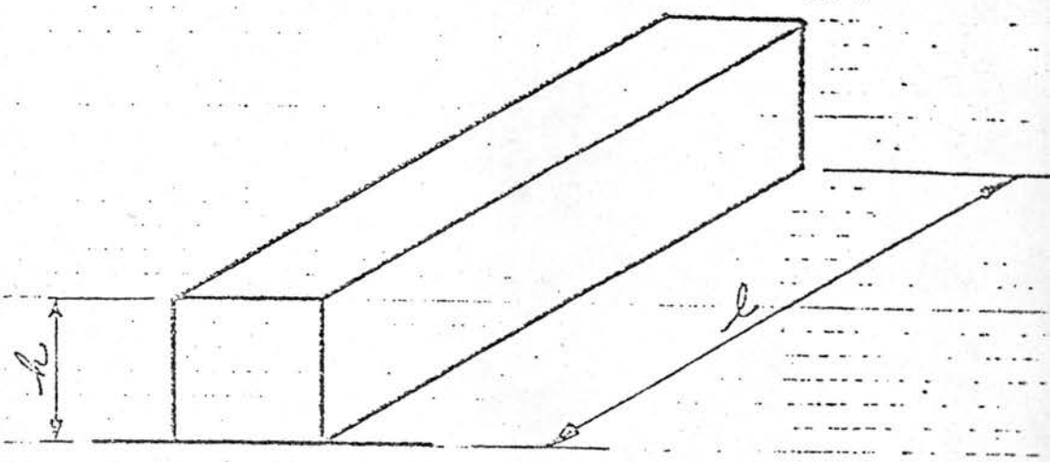
DESIGN LOWER ROOF OR CANOPY FOR LOADS ACCORDING TO FIGURE II + 50% OF DESIGN LOAD FROM UPPER. THE DISTRIBUTION SHOULD BE MADE DEPENDING ON THE RELATIVE SIZES, SLOPES AND POSITIONS OF THE TWO ROOFS.

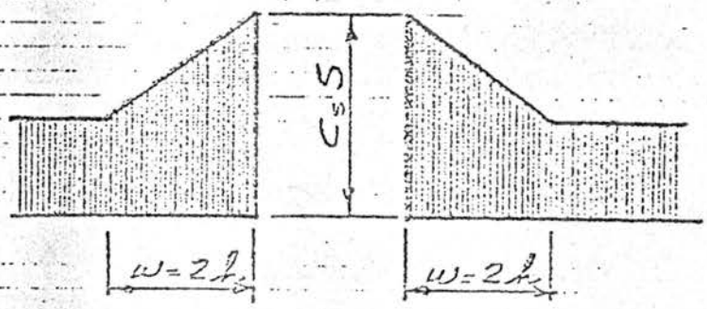
IF, BECAUSE OF A RELATIVELY SMALL LOWER ROOF OR CANOPY, ALL OF THE SLIDING SNOW CANNOT BE RETAINED, APPROPRIATE REDUCTIONS MAY BE MADE. THE DENSITY OF SLIDING SNOW MAY BE RATHER HIGH.

DESIGN UPPER ROOF AS THOUGH IT IS A SINGLE SPAN BUILDING.

FIGURE NO. 3

LOWER ROOF WITH SLOPING UPPER ROOF





w (MINIMUM) = 10 FEET

w (MAXIMUM) = 30 FEET

$$C_s = \frac{10h}{S}$$

IF $\frac{10h}{S} < 1.0$ $C_s = 1.0$

IF $\frac{10h}{S} > 2.5$ $C_s = 2.5$

IF $l < \frac{S}{4.8}$ $C_s = 1.0$

IF $h <$ 5 FEET $w =$ 10 FEET

IF $h >$ 15 FEET $w =$ 30 FEET

h = HEIGHT OF OBSTRUCTION IN FEET

w = WIDTH OF DRIFT IN FEET

l = LENGTH OF OBSTRUCTION OR PROJECTION IN FEET

S = SPECIFIED SNOW LOAD IN P.S.F.

C_s = COEFFICIENT OF INCREASED SNOW LOAD

FIGURE NO. 4

PROJECTIONS & OBSTRUCTIONS

MINNESOTA PLUMBING CODE

Page 19 Table 123(c)(3) after 3H (Seamless Copper Tube, Type L, Hard Temper) is amended to add the following:

	ASTM	Other Specifications
3H(a) Welded Copper Alloy 194 Water, Tube, Type "Heavy", Hard Temper	B543-72	OFT194-101A Navfac TS-15400
3H(b) Stainless Steel Water Tubing, Type SL, Copper Plated Coating (HWT-T439)	A-268 A-651	

Page 19 Table 123(c)(3) after 3J (Seamless Copper Tube, Type M, Hard Temper) is amended to add the following:

3J(a) Welded Copper Alloy 194 Water Tube, Type "Standard", Hard Temper	B543-72	OFT194-101A Navfac TS-15400
3J(b) Stainless Steel Water Tubing, Type SM, Copper Plated Coating (HWT-T439)	A-268 A-651	

Page 21 Table 123(c)(3) after Special Wastes is amended to add the following:

6J Polypropylene (Type II 24308)	D2146

Page 22 MHD 123(d)(3) is amended to read as follows:

(ff) Copper tube 3H, 194 Water Tube 3H(a) or Stainless Steel Water Tubing 3H(b) with 3N fittings.

(gg) Copper tube 3J, 3G, 194 Water Tube 3J(a), or Stainless Steel Water Tubing 3J(b) with 3N fittings may be installed exposed or in frame partitions, or in tunnels and shafts, except that this material may not be laid underground or embedded in masonry or concrete.

Page 33 - MHD 126(b)1 is amended to read as follows:

(1) Where Used. Drainage piping serving fixtures that are located below the elevation of the curb or property line at the point where the building sewer crosses under the curb or property line, and above the crown level of the main sewer, shall drain by gravity into the main sewer, and shall be protected from back flow of sewage by installing an approved back water valve, and each such back water valve shall be installed only in that branch or section of the drainage system which receives the discharge from fixtures located below the elevation of the curb or property line.

Further, in every building hereafter erected or remodeled so that the erection or remodeling creates a new dwelling use which is located below the elevation of the point where the building sewer crosses under the curb or property line, all fixtures installed below such point shall be connected to a separate branch drain. Each such branch drain shall be protected by an approved back water valve and a gate valve. The gate valve shall be located on the sewer connection side of the back water valve.

Further, the back water valve and gate valve may be waived by the Administrative Authority whenever the building is located at a sufficient height above the public sanitary sewer so flooding by backflow will not occur, in the opinion of the Administrative Authority.

Page 19 - Table 123(c)(3) (Seamless Copper Tube, Type L, Hard Temper), Table 123(c)(3) - (Seamless Copper Tube, Type M, Hard Temper), Table 123(c)(3) adding 6J Polypropylene, MHD 123(d)(3) - Copper tube - Stainless Steel Water Tubing and MHD 126(b)1 are adopted to recognize the new materials and methods which have been incorporated in model plumbing codes and to protect occupants which may be subject to back flow of sewage by permitting the installation of special approved back water valves.

The following amendments are not adopted:

Section 1414 of the UBC regarding Sound Transmission Control.

Section 1503 of the UBC regarding fire-resistive protection of exterior walls and openings.

Section 3305(p) of the UBC regarding the installation of scissors-type stairs.

Section 3803(d) 2 - regarding piping for draining purposes.

Page 23 - MHD 123(d)(8) regarding Plastic 6A and 6B and fittings.

Page 23 - MHD 123(d)(9) regarding Plastic 6A or 6B with corresponding fittings.

Page 24 - MHD 123(d)(10) regarding Plastic 6A and 6B with fittings.

Page 24 - MHD 123(d)(11) regarding Plastic 6A or 6b with corresponding fittings.

Section 1414 is not adopted because the value to be received was not shown to be commensurate with the added cost of construction anticipated from implementation of this rule.

Section 1503 is not adopted because of the need to maintain strong fire prevention protection for such occupancies.

Section 3305(p) is not adopted since it was determined that the allowance of such stairs would not provide safe and adequate egress facilities in the event of a fire or other emergency.

MHD 123(d)(8) (9) (10) and (11) are not adopted since no major model Code groups permit such extensive underground use of plastic pipe. Further, an alternative amendment regarding the underground use of plastic pipe is presently under study by the Minnesota Department of Health and the State Building Code Standards Committee and will be the subject of a public hearing in the near future.

STATE OF MINNESOTA
DEPARTMENT OF ADMINISTRATION

Richard L Brubacher

Richard L. Brubacher
Commissioner of Administration

Dated: January 3, 1974

STATE OF MINNESOTA

COUNTY OF RAMSEY

BEFORE THE

COMMISSIONER OF ADMINISTRATION

In the matter of the Proposed Amendments to the Minnesota Building Code and Minnesota Plumbing Code.

ORDER ADOPTING RULES

The above-entitled matter came on for hearing before the Commissioner of Administration of the State of Minnesota on the 26th day of November, 1973, at 8:01 a.m. in the Holiday Inn, St. Paul, Minnesota, after proper notice required by Minnesota Statute 1971, Section 15.0412, Subdivision 4 was served upon all persons, associations and other interested groups registered with the Secretary of State for that purpose.

After affording interested persons an opportunity to present written and oral data, statements and arguments, having heard all of the testimony, having considered all of the evidence adduced and upon the records, files, and proceedings herein, and applicable statutory standards or criteria, and having confirmed the need for the above captioned rules:

NOW, THEREFORE, IT IS ORDERED that this rule identified as amendments to the State Building Code, Uniform Building Code and Minnesota Plumbing Code is adopted this Jan 11, 1974 pursuant to the authority vested in me by Minnesota Statute 1971, Section 16.86.

SBC 103 - regarding Buildings or Structures to which additions, alterations, or repairs are made;

SBC 103 Subsection 4 - Nonstructural Alterations and Repairs;

SBC 103 Subsection 5 - Existing Occupancy;

SBC 103 Subsection 6 - Moved Buildings -- from one location to another;

SBC 103 Subsection 8 - Maintenance -- of all buildings and structures, both existing and new;

SBC 103 Subsection 9 - Unsafe Building Appendages;

SBC 104 - Change term "Administrative Authority" to "Building Official;" change terms "Mayor" or "City Council" to "Governing Body;" change term "City" to "Municipality;" definition of "Municipality;"

SBC 107 - Fire Districts -- delete in its entirety;

SBC 108 - Fallout Shelters;

SBC 110 - Appendices, Annexes and Supplemental Materials -- listed in the Code;

SBC 201 - Adoption of UBC by Reference -- Chapters 2 through 60 and Appendix of the 1973 Edition of the Uniform Building Code;

SBC 201 Chapter 2 - Organization and Enforcement -- of the UBC shall be placed in the Appendix of this Code;

SBC 201 Chapter 3 - Permits and Inspections -- of the UBC shall be placed in the Appendix of this Code;

UBC Chapter 5 Section 512 - Roof Access;

UBC Chapter 5 Table 5-A, D.2 - regarding Nurseries for full-time care of children under kindergarten age;

UBC Chapter 5 Table 5-A, D.3 - regarding Boarding Care Homes, Residential Care Facilities for ambulatory persons, Homes for children of kindergarten age or over;

UBC Section 802(c) - Special Provisions -- Fire Resistive Construction in Division 1 and 2 Occupancies;

UBC Section 810 - Approved Fire Alarms -- in Division 1, 2 and 3 Group C Occupancies;

UBC Section 901 Division 2 - regarding Hospitals, Sanitariums, Sanatoriums, Nursing Homes and similar buildings, Nurseries for full-time care of children under kindergarten age;

UBC Section 901 Division 3 - regarding Boarding Care Homes, Residential Care Facilities for ambulatory persons, Homes for children of kindergarten age or over;

UBC Section 902(b) - Special Provisions -- for smokestop partitions in Division 1 Occupancies;

UBC Section 905 -regarding all portions of Group D Occupancies customarily used by human beings to be provided with light and ventilation;

UBC Section 909 - regarding Approved Fire Alarm Systems to be provided for all Group D Occupancies;

UBC Section 1307(a) - Ceiling Heights;
UBC Section 1314 - Sound Transmission Control;
UBC Chapter 13 Section 1315 - Deadbolt Locks Required;

UBC Section 1407(a) - Ceiling Heights;

UBC Section 1706(d) - Elevator Shafts -- housing and extending through more than two stories;

UBC Section 1716 - regarding all unenclosed floor and roof openings, open and glazed sides of landings, balconies or porches which are more than 30 inches above grade, and roofs used for other than service of the building, to be protected by a guardrail;

UBC Section 2305 - Snow Loads -- potential accumulation of snow at valleys, parapets, roof structures, and offsets in roofs of uneven configuration;

UBC Section 2314(a) - regarding Stresses -- for the purpose of this Code, this State shall be considered to be in Zone "0";

UBC Section 2907(a) - Footings and Foundations -- shall be constructed of solid masonry or concrete;

UBC Section 2908(b) - Determination of Allowable Loads;

UBC Section 3301(c) - High Hazard Building -- definition;

UBC Section 3303(h) - Change in Floor Level at Doors;

UBC Section 3304(h) - Openings -- door openings to be protected by a tight-fitting smoke barrier and fire assembly;

UBC Section 3307(b) - Openings -- all openings in a wall which provide a horizontal exit shall be protected by a fire assembly;

UBC Section 3312(b) - Exit Signs -- shall be provided at every required exit doorway;

UBC Section 3318(c) - Corridors -- minimum clear width of a corridor;

UBC Section 3801(c) - Fire Department Standpipe -- definition;

UBC Section 3802 - Special Automatic Fire-extinguishing Systems -- all Occupancies having commercial cooking equipment;

UBC Section 3803 - Fire Department Standpipes -- where required, location, and detailed requirements;

UBC Section 3804(b) - Wet Standpipes -- extending from the cellar or basement into the topmost story;

UBC Section 4701(a) - regarding the installation of Lath, Plaster and Gypsum Wallboard;

UBC Sections 5001 through 5006 - deleted and replaced by SBC 301 through SBC 337;

UBC Sections 5101 through 5104 - deleted;

SBC 202 - Mechanical Code -- all references in the Uniform Building Code, to the Uniform Mechanical Code, shall be referred to and regulated by the Minnesota Heating, Ventilating, Air-conditioning and Refrigeration Code;

FLOOD PROOFING REGULATIONS

SBC 203 - adoption of Flood Proofing Regulations by Reference;

SBC 203 Section 200.2 - Official Flood Plain Zoning Map;

SBC 203 Section 200.3 - Regulatory Flood Datum;

SBC 203 Section 201.1 - Application -- these regulations shall apply to the construction, alteration, and repair of any building or parts of a building or structure in the Flood Hazard Area(s) of the municipalities;

SBC 203 Section 201.2 - Nonconforming Use -- Flood Proofing Regulations;

SBC 203 Section 203.3 - Records -- test reports, certifications, or the results of such tests shall be kept on file in the office of the Building Official;

SBC 203 Section 204.6 - Board of Appeals -- creation;

SBC 203 Section 204.7 - Validity -- it shall be unlawful for any person, firm or corporation or agency to erect, construct, enlarge, alter, repair, move, improve, remove, convert, or demolish, any building or structure in the Flood Hazard Area(s);

SBC 203 Section 205.1 - Statement of Intention to Improve -- Flood Hazard Area(s);

SBC 203 Section 205.2 - Permits Required -- no person, firm or corporation shall erect, construct, enlarge, alter, repair, move, remove, convert, or demolish any building or structure or any part thereof, or make any other improvement;

SBC 203 Section 205.3(2) - Plans and Specifications -- shall be prepared by an engineer or architect licensed by the State to practice as such for any and all proposed improvements in the primary Flood Hazard Area(s);

SBC 203 Section 205.3(3) - Owner's Contingency Plan;

SBC 203 Section 209.1 - New Building and Structures -- primary Flood Hazard Area(s);

SBC 203 Section 209.3 - Use of Space Below the Regulatory Flood Datum;

SBC 203 Section 210.7 - Placard Types;

SBC 203 Section 300.2 - Interpretation -- Minn. Regs. NR 85(c);

SBC 203 Section 301.2.9 - Habitable Room - definition;

SBC 203 Section 301.4.1 - State Building Code -- setting forth standards for the construction, addition, modification and repair of buildings and other structures for the purpose of protecting the health, safety, and general welfare of the public;

SBC 203 Section 402.1 Table 2 - regarding various degrees of protection required to permit uses of spaces for each Flood-Proofing class;

SBC 203 Section 612.2.1 - Natural Terrain -- RFD;

SBC 203 Section 612.2.2 - Building on Fill -- the building and all parts thereof may be constructed above the RFD on an earth fill;

SBC 203 Section 802.1 - Applicability -- spaces to be intentionally flooded with water shall be provided with the necessary equipment, devices, piping, controls, etc., necessary for automatic flooding during the flood event and drainage of the space(s) when flood waters recede;

SBC 203 Section 1301.2.1 - Heating Systems -- utilizing gas or oil fired furnaces;

SBC 203 Section 1302.2.2 - regarding the state of dryness of a space dependent on a sump pump;

SBC 203 Section 1302.2.3.1 - regarding all vents which shall extend to an elevator of at least three feet above the RFD;

SBC 203 Section 1302.3 - Sewage Disposal/Treatment;

SBC 203 Section 1302.3.1 - amended for deletion in its entirety -- Cesspools/ Sewage Disposals;

SBC 203 Section 1302.3.2 - amended for deletion in its entirety -- Seepage Pits;

SBC 203 Section 1302.4.1 - Water Supply Wells, Tanks, Filters, Softeners, Heaters, and all appliances located below the RFD -- shall be protected against contamination by covers, walls, copings, or castings;

SBC 204 through SBC 299 - reserved for future use;

ELEVATORS, DUMBWAITERS, ESCALATORS, MANLIFTS, MOVING WALKS, HOISTS AND LIFTS

SBC 8801 - Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts -- shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property;

SBC 8802 - Existing Installation and New Installation -- definitions;

SBC 8803 - All Existing Installations of Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts -- may be continued in service as long as they are properly maintained;

SBC 8804 - Inspections, Tests and Approval -- of Elevators, Dumbwaiters, Escalators, Manlifts, Moving Walks, Hoists and Lifts;

SBC 8805 - Accidents -- to be reported -- investigated -- possible discontinuance of operation -- removal of parts restricted;

SBC 8806 - Adoption of ANSI-A17.1 by Reference -- Exceptions and Amendments to ANSI A-17.1 -- Limited uses of an Elevator;

SBC 8809 - Temporary Interior and Exterior Hoists -- shall be designed, constructed, installed and maintained so as to be reasonably safe to life, limb and adjoining property;

SBC 8810 - Mechanized Parking Garage Equipment -- shall be designed, constructed, installed and maintained so as to be reasonable safe to life, limb and adjoining property;

SBC Appendix C - Variations of Snow Loads;

PLUMBING AMENDMENTS

MHD Table 123(c)(3) - Seamless Copper Tube, Type L, Hard Temper;

MHD Table 123(c)(3) - Seamless Copper Tube, Type M, Hard Temper;

MHD Table 123(c)(3) - 6J Polypropylene;

MHD 123(d)(3) - Copper Tube, Water Tube and Stainless Steel Water Tubing;

MHD 126(b)1 - Where Used -- drainage piping shall drain by gravity into the main sewer, shall be protected from back flow of sewage by installing an approved back water valve, and shall be installed only in that branch or section of the drainage system which receives the discharge from fixtures located below the elevation of the curb or property line.

STATE OF MINNESOTA
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