

CHAPTER Comm 62
BUILDINGS AND STRUCTURES

Comm 62.0001 Standards. The design, construction, and maintenance of public buildings and places of employment shall comply with s. Comm 61.05, except as provided in this code and ch. Comm 14.

Comm 62.0100 Administration. (1) GENERAL. Except for the requirements in IBC sections 102.4 and 115, the requirements in IBC chapter 1 are not included as part of this code.

Note: The sections in this chapter are generally numbered to correspond with the section numbering in the IBC; e.g., s. Comm 62.0202 corresponds to IBC section 202, and s. Comm 62.3408 corresponds to IBC section 3408.

Note: As used throughout this code, “not included as part of this code” is intended to convey that the referenced requirements are not incorporated herein, and therefore cannot be enforced through this code. However, local ordinances may include the referenced requirements, as specified in s. Comm 61.03.

(2) UNSAFE STRUCTURES AND EQUIPEMENT. This is a department rule in addition to the requirements in IBC section 115: The requirements in IBC section 115 apply to all public buildings and structures and places of employment, that exist before, on, or after the effective date of this code.

Comm 62.0202 Definitions. (1) ADDITIONS. These are department definitions in addition to the definitions in IBC section 202:

(a) “Air barrier” means a material or combination of materials collectively having a maximum air leakage rate of 0.06 cfm/ft.² at 0.30 in. H₂O, when tested in accordance with ASTM E 783, installed to resist air leakage into the exterior envelope.

(b) “Historic building” means a “qualified historic building” as defined in s. Comm 70.17 (15).

Note: Section Comm 70.17 (15) reads as follows: “‘Qualified historic building’ means a building which is:

“(a) Listed on, or nominated by the state historical society for listing on, the national register of historic places in Wisconsin;

“(b) Included in a district which is listed on, or has been nominated by the state historical society for listing on, the national register of historic places in Wisconsin, and has been determined by the state historical society to contribute to the historic significance of the district;

“(c) Listed on a certified municipal register of historic property; or

“(d) Included in a district which is listed on a certified municipal register of historic property, and has been determined by the municipality to contribute to the historic significance of the district.”

(c) “IBC and International Building Code” mean the 2000 edition of the *International Building Code*[®], as adopted and modified in this code.

(d) “ICC Electrical Code” means ch. Comm 16.

(e) “IECC and International Energy Conservation Code” mean the 2000 edition of the *International Energy Conservation Code*[®], as adopted and modified in this code.

(f) “IFC and International Fire Code” mean the 2000 edition of the *International Fire Code*[®].

(g) “IFGC and International Fuel Gas Code” mean the 2000 edition of the *International Fuel Gas Code*[®], as adopted and modified in this code.

(h) “IMC and International Mechanical Code” mean the 2000 edition of the *International Mechanical Code*[®], as adopted and modified in this code.

(i) “IPC and International Plumbing Code” mean chs. Comm 81 to 87.

(j) “IPSC and International Private Sewage Code” mean chs. Comm 81 to 87.

(k) “Multifamily dwelling” has the meaning given in s.101.971 (2), Stats.

Note: Section 101.971 (2), Stats., reads as follows: “ ‘Multifamily dwelling’ means an apartment building, rowhouse, town house, condominium or manufactured building, as defined in s. 101.71 (6), that does not exceed 60 feet in height or 6 stories and that consists of 3 or more attached dwelling units the initial construction of which is begun on or after January 1, 1993. ‘Multifamily dwelling’ does not include a facility licensed under ch. 50.”

(2) SUBSTITUTIONS. Substitute the following definitions for the corresponding definitions listed in IBC section 202:

(a) “Approved” means acceptable to the department.

(b) “Dwelling unit” has the meaning given in s. 101.61 (1), Stats.

Note: Section 101.61 (1), Stats., reads in part: “ ‘Dwelling unit’ means a structure or that part of a structure which is used or intended to be used as a home, residence or sleeping place by one person or by 2 or more persons maintaining a common household, to the exclusion of all others.”

Comm 62.0310 Use and occupancy classification. This is a department informational note to be used under IBC section 310.2:

Note: See s. Comm 61.01 Notes for statutory definitions of adult family home and community-based residential facility. See s. Comm 62.0202 for definitions of dwelling unit and multifamily dwelling.

Comm 62.0400 Special detailed requirements based on use and occupancy. These are department rules in addition to the requirements in IBC chapter 4:

(1) **FIREWORKS, BLACK POWDER AND EXPLOSIVE MATERIALS.** Fireworks, black powder and explosive materials shall be stored and isolated in accordance with chs. Comm 7 and Comm 14.

(2) **RECYCLING SPACE.** An owner of a building shall provide a separate room or designated space within or adjacent to the building for the separation, temporary storage and collection of recyclable materials that are likely to be generated by the building occupants, under any of the following conditions:

(a) The construction of a new building.

(b) An increase in the existing area of a building that increases the gross floor area of the structure by 50 percent or more.

(c) An alteration of 50 percent or more of the existing area of a building that is 10,000 square feet or more in area.

Note: See Appendix B for guidelines for recommended designated areas.

Note: The collection and temporary storage of recyclable materials that are flammable or combustible is regulated by ch. Comm 14. Storage of liquids that are flammable or combustible is regulated by ch. Comm 10. Owners of buildings where these materials are stored should consult those chapters for isolation, removal and storage standards.

(3) **LUNCHROOMS.** A space for eating lunches shall be provided in all places of employment where there is exposure to injurious dusts, toxic material and industrial poisons. Such space shall be physically separate from any location where there is exposure to toxic materials. Toilet rooms shall not be permitted to serve as lunchrooms.

(4) **COMMUNITY-BASED RESIDENTIAL FACILITIES.** A newly constructed building or portion thereof that is a community-based residential facility serving three to eight unrelated adults shall comply with chs. Comm 20 to 25 instead of all other requirements of this code.

Comm 62.0401 Chapter Comm 10 compliance. This is a department informational note to be used under IBC section 401.1:

Note: See ch. Comm 10 for additional requirements for motor vehicle service stations and for storage, handling, processing and transporting of flammable and combustible liquids.

Comm 62.0402 Lease plan. The requirements in IBC section 402.3 are not included as part of this code.

Comm 62.0403 High-rise buildings. (1) AUTOMATIC SPRINKLERS FOR HIGH-RISE AND DORMITORY BUILDINGS. These are department informational notes to be used under IBC section 403.2:

Note: Under s. 101.14 (4) (b) 1, Stats., an automatic sprinkler system must be installed throughout every building that is more than 60 feet in height, except this requirement does not apply to open parking structures.

Note: Under s. 101.14 (4) (b) 3, Stats., an automatic sprinkler system must be installed by January 1, 2006, on each floor of all University of Wisconsin System residence halls and dormitories which are over 60 feet tall and for which initial construction was begun prior to April 26, 2000.

(2) FUEL SUPPLY FOR STANDBY POWER. Substitute the following wording for the exception in IBC section 403.10.1.1: Where the system is supplied with pipeline natural gas.

Comm 62.0406 Special hazards in parking garages. Substitute the following wording for the requirements and exception in IBC section 406.2.8:

(1) Except as provided in subs. (2) and (3), fuel-fired appliances shall be located in a room that is separated from the parking garage by construction which will form a solid barrier between the room and the garage. Entrance to the room shall be from the outside, or by means of a vestibule creating a two-doorway separation, with both doors self-closing.

(2) Unit heaters may be suspended in a parking garage in accordance with the IMC.

(3) A single interior self-closing door shall be allowed provided the sources of ignition in the appliance are at least 18 inches above the floor.

Comm 62.0414 Information required. The requirements in IBC section 414.1.3 are not included as part of this code.

Comm 62.0415 Hazardous materials Substitute the following wording for the corresponding definition in IBC section 415.2: The concentration of air-borne contaminants which poses a threat of death, immediate or delayed permanent adverse health effects, or effects which could prevent escape from such an environment. This contaminant concentration level is established by the National Institute of Occupational Safety and Health based on both toxicity and flammability. It generally is expressed in parts per million by volume, or milligrams per cubic meter.

Comm 62.0500 Fire apparatus access. These are department rules in addition to the requirements in IBC chapter 5:

(1) GENERAL. Unobstructed fire lanes that are accessible from a public road shall be provided for every facility, building or portion of a building in accordance with this code.

(2) EXTENT. (a) 1. Except as provided in par. (b), the fire lane shall extend to within 150 feet of all portions of the building or facility or any portion of the exterior wall of the first story as measured by an approved route around the exterior of the building or facility.

2. Where any part of the building or facility is more than 30 feet above the lowest level of fire apparatus access, the fire lane shall also be parallel to one entire side of the building or

facility with the near edge of the fire lane within 30 feet of the building or facility on that parallel side.

(b) The fire code official may increase the dimension of 150 feet where any one of the following conditions are met:

1. The building is equipped with a complete automatic fire sprinkler system.

2. A code-complying fire lane cannot be provided due to location on property, topography, grades, waterways or other similar conditions, and an approved alternative means of fire protection is provided.

(3) DIMENSIONS. (a) A fire lane shall have a minimum unobstructed vertical clearance of 13.5 feet.

(b) Buildings or facilities with any part more than 30 feet above the lowest level of fire apparatus access shall be provided with a fire lane capable of accommodating aerial fire apparatus. Overhead power or utility lines may not be located across or within a fire lane for aerial fire apparatus.

(c) Except as provided in pars. (d) and (e), a fire lane shall have a minimum unobstructed width of 20 feet.

(d) Where a fire hydrant is provided to supply fire apparatus on the fire lane, the minimum unobstructed width shall be 26 feet for a minimum distance of 20 feet on each side of the fire hydrant.

(e) Where any part of the building or facility is more than 30 feet above the lowest level of fire apparatus access, the minimum unobstructed width of the fire lane parallel to one side of the building or facility as required under sub. (2) (a) 2., shall be 26 feet.

(4) TURNING RADIUS. The inside turning radius of a fire lane shall be 28 feet or as determined by the fire code official.

(5) DEAD ENDS. A dead-end fire lane that is longer than 150 feet shall terminate in a turnaround area which consists of one of the following:

(a) A cul-de-sac with a minimum diameter of 70 feet.

(b) A 45 degree wye with a minimum length of 60 feet per side.

(c) A 90 degree tee with a minimum length of 60 feet per side.

(6) SIGNAGE. The fire code official may require the installation and maintenance of signs related to fire lanes.

(7) GATES AND BARRICADES. (a) The fire code official may require the installation, maintenance, securement and emergency operability of gates or barricades across a fire lane.

(b) Security gates may be installed across fire lanes subject to the approval of the fire code official.

(8) SURFACE. Fire lanes shall be designed, installed and maintained to support the imposed loads of fire apparatus and shall be surfaced to provide all-weather driving capabilities.

(9) BRIDGES AND ELEVATED SURFACES. Bridges or elevated surfaces that are part of a fire lane shall be designed for a live load sufficient to carry the imposed load of the fire apparatus.

(10) GRADE. The grade of the fire lane shall be approved by the fire code official based on the fire department apparatus and site topography.

(11) TIMING. Required fire lanes shall be provided prior to the placement of combustible materials at the building site, or the construction of any portion of a building or facility above the footing and foundation.

Comm 62.0702 Fire separation distance. Substitute the following definition for the corresponding definition listed in IBC section 702: The distance measured from the building face to the closest interior lot line, to the centerline of a street alley or public way, to a permanent no-build easement line, or to an imaginary line between two buildings on the same property. The distance shall be measured at right angles from the lot line.

Comm 62.0703 Fire-resistance ratings. Substitute the following wording for the requirements, but not the exception, in IBC section 703.2: The fire-resistance rating of building elements shall be determined in accordance with the test procedures set forth in ASTM E 119 or in accordance with IBC section 703.3. Materials and methods of construction used to protect joints and penetrations in fire-resistance-rated building elements shall not reduce the required fire-resistance rating.

Comm 62.0704 Connections between buildings. This is a department exception to the requirements in IBC section 704.1: This section does not apply to connections between buildings, that are in compliance with IBC section 3104.

Comm 62.0705 Fire wall identification. These are department rules in addition to the requirements in IBC section 705:

(1) PURPOSE. Pursuant to s. 101.135, Stats., the purpose of this section is to establish uniform standards for the identification of fire walls on the exterior of buildings.

(2) MUNICIPAL ORDINANCE. A city, village or town may by ordinance require owners to identify the location of a fire wall at the exterior wall of a building with a sign.

(3) SIGN REQUIREMENTS (a) *General*. The sign shall consist of 3 circles arranged vertically on the exterior wall, marking the location of the fire wall and centered on the fire wall. The circles shall either be affixed directly to the surface of the building or may be placed on a background material that is affixed to the building.

(b) *Size of circle*. Each circle shall be the same size. The diameter of the circle shall be at least 1 1/2 inches, but no greater than 2 inches.

(c) *Spacing*. The circles shall be spaced an equal distance apart. The distance measured from the top of the uppermost circle to the bottom of the lowermost circle shall be no more than 12 inches.

(d) *Color*. The color of the circle shall be red, amber (orange-yellow) or white (clear) and shall be reflective. The color of the circle shall contrast with the color of the background.

Comm 62.0712 Fire test criteria. Substitute the following wording for the requirements, but not the exception, in IBC section 712.3: Fire-resistant joint systems shall be tested in accordance with the requirements of UL 2079. Nonsymmetrical wall joint systems shall be tested with both faces exposed to the furnace, and the assigned fire-resistance rating shall be the shortest duration obtained from the two tests. When evidence is furnished to show that the wall was tested with the least fire-resistant side exposed to the furnace, the wall need not be subjected to tests from the opposite side.

Comm 62.0715 Smoke dampers in health care facilities. This is an additional department exception to the requirements in IBC section 715.5.5: Smoke dampers are not required in Group I-2 duct penetrations of smoke barriers in fully ducted HVAC systems.

Comm 62.0719 Minimum protection for floor and roof systems. This is a department rule in addition to the requirements in IBC Table 719.1(3):

IBC TABLE 719.1(3)
MINIMUM PROTECTION FOR FLOOR AND ROOF SYSTEMS
(Partial Table)

| FLOOR OR ROOF CONSTRUCTION | CEILING CONSTRUCTION | THICKNESS OF FLOOR OR ROOF SLAB (inches), FOR 1-HOUR RATING | MINIMUM THICKNESS OF CEILING (inches), FOR 1-HOUR RATING |
|---|---|---|--|
| Line 22. Steel joists, floor trusses and flat or pitched roof trusses spaced a maximum 24 inches on center with 1/2-inch wood structural panels with exterior glue applied at right angles to top of joist or top chord of trusses with No. 8 screws. The wood structural panel thickness shall not be less than nominal 1/2-inch nor less than required by IBC chapter 22. | Base layer 5/8-inch Type X gypsum board applied at right angles to steel framing 24 inches on center with 1-inch Type S drywall screws spaced 24 inches on center. Face layer 5/8-inch Type X gypsum board applied at right angles to steel framing attached through base layer with 1 5/8-inch Type S drywall screws 12 inches on center at end joints and intermediate joints and 1 1/2-inch Type G drywall screws 12 inches on center placed 2 inches back on either side of face layer end joints. Joints of the face layer are offset 24 inches from the joints of the base layer. | Varies | 1 1/4 |

Comm 62.0720 Additional protection. Substitute the following wording for the requirements in IBC section 720.6.2.5 and IBC Table 720.6.2(5): IBC Table 720.6.2(5) indicates the time increments to be added to the fire resistance where glass fiber, rockwool, slag mineral wool, or cellulose insulation is incorporated in the assembly.

IBC TABLE 720.6.2(5)
TIME ASSIGNED FOR ADDITIONAL PROTECTION

| DESCRIPTION OF ADDITIONAL PROTECTION | FIRE RESISTANCE (minutes) |
|---|---------------------------|
| Add to the fire resistance rating of wood stud walls if the spaces between the studs are completely filled with glass fiber mineral wool batts weighing not less than 2 lb./cu ft (0.6lb/sq ft of wall surface), or rockwool or slag mineral wool batts weighing not less than 3.3 lb/cu ft (1lb/sq ft of wall surface), or cellulose insulation having a nominal density not less than 2.6lb/cu ft.. | 15 |

Comm 62.0901 Fire protection systems. (1) MODIFICATIONS. Substitute the following informational note for the requirements in IBC section 901.3.

Note: See chs. Comm 14 and 61 for requirements to shut down, impair, remove or modify fire protection systems.

(2) FIRE HOSE THREADS. These are department informational notes to be used under IBC section 901.4:

Note: Section 213.15, Stats., regulates fire hose threads and fittings and reads as follows: “All fire hose fittings, apparatus fittings, 1.5 and 2.5 inches in diameter purchased or procured by a fire department or fire company shall be of the national standard hose thread as adopted by the national fire protection association. No fire department shall utilize hose and equipment not in conformance with the requirement that all threads shall be national standard hose thread as adopted by the national fire protection association. Any person offering for sale nonstandard hose couplings, fittings or apparatus fittings may be fined not less than \$100 nor more than \$500.”

Note: NFPA 1963 contains the specifications for national standard hose thread.

Comm 62.0902 Definition. Substitute the following definition and informational note for the corresponding definition listed in IBC section 902.1: "Automatic sprinkler system" or "Automatic fire sprinkler system" has the meaning given in s. 145.01 (2), Stats.

Note: Section 145.01 (2), Stats., reads as follows: “ ‘Automatic fire sprinkler system,’ for fire protection purposes, means an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply, such as a gravity tank, fire pump, reservoir or pressure tank or connection beginning at the supply side of an approved gate valve located at or near the property line where the pipe or piping system provides water used exclusively for fire protection and related appurtenances and to standpipes connected to automatic sprinkler systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.”

Comm 62.0903 Automatic fire sprinkler systems. (1) ALTERNATIVE PROTECTION. Substitute the following wording for the requirements in IBC section 903.1.1: Alternative automatic fire-extinguishing systems complying with IBC section 904 shall be permitted in lieu of automatic sprinkler protection where recognized by the applicable standard.

(2) MULTIFAMILY DWELLINGS. For multifamily dwellings only, substitute the following wording for the requirements, but not the exception, in IBC section 903.2.8: An automatic fire sprinkler system or 2-hour fire resistance shall be provided in every multifamily dwelling that contains floor areas or dwelling units exceeding any of the thresholds established in Table 62.0903. The floor areas specified in the thresholds do not include any of the following:

(a) Areas that are outside a building, as in the following:

1. Porches that are open to the outside atmosphere.
2. Exterior stairs.
3. Exterior platforms.
4. Exterior landings.
5. Exterior decks.

(b) An attached garage that meets all of the following criteria:

1. Has a floor area of 600 square feet or less.
2. Serves a single dwelling unit.
3. Is accessed directly from the dwelling unit.
4. Is separated from the remainder of the building by at least 1-hour rated fire-resistive construction.

Note: Housing units that receive federal funding may be required by federal regulations to have sprinkler protection regardless of building size.

TABLE 62.0903
Thresholds Above Which a Sprinkler System or 2-Hour Fire Resistance Is Required in a Multifamily Dwelling

| Class of Construction | Total Floor Area Within Individual Dwelling Units | Number of Units | Total Floor Area of Nondwelling Unit Portions (Common use areas, such as corridors, stairways, basements, cellars, vestibules, community rooms, laundry rooms, pools, etc.) |
|-----------------------|---|-----------------|---|
| Type IA | 16,000 sq ft | 20 units | 16,000 sq ft |
| Type IB | | | 12,000 sq ft |
| Type IIA | | | 8,000 sq ft |
| Type IIB | | | 5,600 sq ft |
| Type III | | | |
| Type IV | | | |
| Type VA | | | |
| Type VB | | | 4,800 sq ft |

(3) UNIVERSITY DORMITORIES. This is a department informational note to be used under IBC section 903.2.8:

Note: Under s. 101.14 (4) (b) 3, Stats., an automatic sprinkler system must be installed at the time of construction of each floor of any University of Wisconsin System residence hall or dormitory that is constructed after April 26, 2000, regardless of the height of the building.

(4) EXEMPT LOCATIONS. Substitute the following wording for exempt location 2 in IBC section 903.3.1.1.1: Any room or space where sprinklers are considered undesirable because of the nature of the contents, where approved by the department.

(5) FIRE DEPARTMENT CONNECTION. Substitute the following wording for the requirements in IBC section 903.3.7: The fire department connection shall be installed in an accessible location acceptable to the fire chief.

Comm 62.0904. Alternative automatic fire-extinguishing systems. These are department rules in addition to the requirements in IBC section 904:

(1) WATER MIST FIRE PROTECTION SYSTEMS. Where a water mist fire protection system is installed, it shall comply with NFPA 750.

(2) MANUAL-WET SPRINKLER SYSTEMS. (a) *Where allowed.* A manual-wet sprinkler system may not be installed in a building unless all of the following conditions are met:

1. There is no municipal water system available to serve the property.
2. There is no provision under this code that requires the building or a portion of the building to have an automatic fire sprinkler system.
3. The municipality where the building is to be located has an adopted ordinance that requires the installation of manual-wet sprinkler systems and requires these systems to meet the provisions of this subsection.

(a) *General requirements.* 1. A building protected with a manual-wet sprinkler system shall be considered unsprinklered under all other code provisions.

2. Each manual-wet sprinkler system shall be provided with a fire department connection. The fire department connection shall be installed in an accessible location acceptable to the fire chief.

3. All above ground system piping throughout the building shall be labeled as a “manual-wet sprinkler system.” Labels shall be placed at all of the following locations:

a. On the piping at intervals of not more than 25 feet and at each side where the piping passes through a wall, floor or roof.

b. At the fire department connection.

c. At all valves and hose outlets.

4. The manual-wet sprinkler system design and installation shall comply with the automatic fire sprinkler system requirements of NFPA 13 or NFPA 13R, as applicable, except that the system comprised of the pilot line, fire department connection and fire department apparatus is considered as the approved water supply for the system.

5. A manual-wet sprinkler system shall be supplied with water through the fire department connection using fire department apparatus.

6. The plumbing well, water service and pressure tank shall be of a size and capacity to supply the hydraulically most remote sprinkler with the required waterflow and pressure for a minimum of 10 minutes.

7. A pilot line shall be connected from the manual-wet sprinkler system to the plumbing water supply system at the well pressure tank. The pilot line shall be of a size that is adequate to supply the hydraulically most remote sprinkler in the system.

8. The connection of a manual-wet sprinkler system to a plumbing water supply system shall be protected against backflow conditions in accordance with s. Comm 82.41.

9. The actuation of any sprinkler in the system shall operate the waterflow indicating device, which shall initiate a fire alarm within the building.

10 Upon actuation of the building fire alarm, a fire alarm signal shall be sent automatically to the fire department providing fire protection to the building.

(c) *Instatller qualifications.* The installation or alteration of a manual-wet sprinkler system shall be performed by a licensed individual as specified for the installation of an automatic fire sprinkler system under subch. V of ch. Comm 5.

Comm 62.0907 Fire alarm and detection systems. (1) CONSTRUCTION DOCUMENTS. The requirements in IBC section 907.1.1 are not included as part of this code.

(2) SMOKE ALARMS. These are department informational notes to be used under IBC section 907.2.10 (intro.):

Note: Section 101.145 (2) and (3) (a), Stats., address installation of smoke detectors and read as follows: Section 101.145 (2) “A smoke detector required under this section shall be approved by underwriters laboratory.”

(3) (a) “The owner of a residential building shall install any smoke detector required under this section according to the directions and specifications of the manufacturer of the smoke detector.”

Note: Section 101.145 (4), Stats., addresses retroactivity requirements for buildings constructed prior to the effective date of this section. This statute section states “The owner of a residential building the initial construction of which is commenced before, on or after May 23, 1978, shall install and maintain a functional smoke detector in the basement and at the head of any stairway on each floor level of the building and shall install a functional smoke detector either in each sleeping room of each unit or elsewhere in the unit within 6 feet of each sleeping area and not in a kitchen.”

Note: Under Section 101.145 (1) (b), Stats., “sleeping area” means the area of the [dwelling] unit in which the bedrooms or sleeping rooms are located. Bedrooms or sleeping rooms separated by another use area such as a kitchen or living room are separate sleeping areas but bedrooms or sleeping rooms separated by a bathroom are not separate sleeping areas.

(3) PROTECTIVE COVERS. Substitute the following wording for the requirements in IBC section 907.3.5: The building official is authorized to require the installation of listed manual fire alarm box protective covers to prevent malicious false alarms or provide the manual fire alarm box with protection from physical damage. The protective cover shall be transparent or red in color with a transparent face to permit visibility of the manual fire alarm box. Each cover shall include proper operating instructions.

Comm 62.0909 Smoke control systems. (1) INSPECTION AND TEST REQUIREMENTS. Substitute the following wording for the requirements in IBC section 909.3: In addition to the ordinary inspection and test requirements that buildings, structures and parts thereof are required to undergo, smoke control systems subject to the provisions of IBC section 909 shall undergo inspections and tests sufficient to verify the proper

commissioning of the smoke control design in its final installed condition. The design submission accompanying the construction documents shall clearly detail procedures and methods to be used and the items subject to such inspections and tests. Such commissioning shall be in accordance with generally accepted engineering practice and, where possible, based on published standards for the particular testing involved.

(2) **INSPECTIONS FOR SMOKE CONTROL.** Substitute the following wording for the requirements in IBC section 909.18.8: Smoke control systems shall be tested by a qualified agency.

(3) **SCOPE OF TESTING.** Substitute the following wording for the requirements in IBC section 909.18.8.1: Inspections shall be conducted in accordance with the following:

(a) During erection of ductwork and prior to concealment for the purposes of leakage testing and recording of device location.

(b) Prior to occupancy and after sufficient completion for the purposes of pressure-difference testing, flow measurements, and detection and control verification.

(4) **QUALIFICATIONS.** Substitute the following wording for the requirements in IBC section 909.18.8.2: Inspection agencies for smoke control shall have expertise in fire protection engineering, mechanical engineering and certification as air balancers.

(5) **REPORT FILING.** Substitute the following wording for the requirements in IBC section 909.18.8.3.1: A copy of the final report shall be maintained and made available to the building official upon request.

(6) **SYSTEM ACCEPTANCE.** The requirements in IBC section 909.19 are not included as part of this code.

Comm 62.1003 Egress for outdoor areas. Substitute the following wording for the requirements, but not the exceptions, in IBC section 1003.2.2.10: Yards, patios, courts and similar outdoor areas accessible to and usable by the building occupants shall be provided with means of egress as required by IBC chapter 10. The occupant load of such outdoor areas shall be based on the anticipated use. Where outdoor areas are to be used by persons in addition to the occupants of the building, and the path of egress travel from the outdoor areas passes through the building, means of egress requirements for the building shall be based on the sum of the occupant loads of the building plus the outdoor areas.

Comm 62.1005 Guard tower exiting. This is an additional department exception to the requirements in IBC section 1005.2.2: Buildings of Group I-3 occupancy that are used as guard towers, provided they are no taller than two stories, have no more than 10 occupants, and have a travel distance of no more than 75 feet.

Comm 62.1006 Safe dispersal areas. This is a department rule in addition to the requirements in IBC section 1006.2: On sites where a public way is more than 100 feet from

the building, the exit discharge may lead to a safe dispersal area such as a parking lot or fire access lane. The safe dispersal area may not be less than 50 feet from the building served and shall be large enough to accommodate all occupants of the building, based on at least 3 square feet of area per occupant.

Comm 62.1101 Accessibility. Substitute the following wording for the requirements in IBC section 1101.2: Buildings and facilities shall be designed and constructed to be accessible in accordance with this chapter, with ICC/ANSI A117.1 and with the following changes, additions, or omissions to the ICC/ANSI A117.1 requirements:

(1) DOORS AND DOORWAYS. This is a department informational note to be used under ICC/ANSI A117.1 section 1003:

Note: In accordance with s. 101.132 (2) (a) 4., Stats., a renter of a dwelling unit in covered multifamily housing may request the landlord to install lever door handles on any doors inside the dwelling unit or install single-lever controls on any plumbing fixtures used by the renter. These requests shall be provided by the landlord at no additional cost to the renter.

(2) OPERABLE CONTROLS. This is a department rule in addition to the requirements in ICC/ANSI A117.1 section 1003.9: Circuit controls, when provided for use by the tenants, shall comply with ICC/ANSI A117.1 sections 309.2 and 309.3.

Comm 62.1104 Multilevel buildings and facilities. Substitute the following wording for the requirements and exceptions in IBC section 1104.4:

(1) ACCESSIBLE ROUTE. Except as specified in sub. (2), at least one accessible route shall connect each level, including mezzanines, in all multilevel buildings and facilities.

(2) EXCEPTIONS. (a) An accessible route is not required to floors that are above and below accessible levels and that have an aggregate area of not more than 3,000 square feet unless the level contains offices of health care providers (Group B or Group D), government-owned or operated facilities, passenger transportation facilities and airports (Group A-3 or Group B) or multiple tenant facilities of Group M.

(b) In Groups A, I, R and S occupancies and care facilities in accordance with IBC section 1107.4, levels that do not contain accessible elements or other spaces required by IBC section 1107 are not required to be served by an accessible route from an accessible level.

(c) An accessible route is not required to levels located above or below the accessible level in government-owned or operated buildings or facilities which are less than three stories and which are not open to the general public, if the floor level above or below the accessible level has a capacity of no more than 5 persons and is less than 500 square feet in area. The floor level above or below the accessible level that is less than 500 square feet shall have a sign stating a maximum capacity of 5 persons, and the sign shall be placed in a conspicuous location at the main entrance to the floor level.

Note: Examples include drawbridge towers and boat traffic towers, lock and dam control stations, press boxes, and train dispatching towers.

Comm 62.1106 Groups R-2 and R-3. Substitute the following wording for the requirements in IBC section 1106.2: Two percent, but not less than one, of each type of parking space provided for occupancies in Groups R-2 and R-3, which are required to have Type A or Type B dwelling units, shall be accessible. Where parking is provided within or beneath a building, accessible parking spaces shall also be provided within or beneath the building.

Comm 62.1107 Accessible dwelling units. Substitute the following wording for the requirements and exceptions in IBC section 1107.5.4:

(1) NUMBER AND TYPE OF DWELLING UNITS. (a) Except as specified in subs. (2) and (3), Type A and Type B dwelling units complying with ICC/ANSI A117.1 shall be provided in Group R-2 and R-3 occupancies in accordance with all of the following:

1. In buildings containing 3 or more dwelling units, all of the dwelling units shall be Type A or Type B dwelling units.

2. In occupancies of Group R-2 containing more than 20 dwelling units, at least 2 percent, but not less than 1, of the dwelling units shall be a Type A dwelling unit.

(b) For the purposes of calculating the number of Type A and Type B dwelling units, structurally connected buildings as specified in IBC section 3104 and buildings separated by fire walls specified in IBC section 705 shall be considered one structure.

Note: Type A and Type B dwelling units specified in IBC section 1107.5.4 have the same meaning as “covered multifamily housing” as defined in s. 101.132 (1) (d), Stats. Section 101.132 (1) (d), Stats., reads as follows: “ ‘Covered multifamily housing’ means any of the following:

“1. Housing that is first ready for occupancy on or after October 1, 1993, consisting of 3 or more dwelling units if the housing has one or more elevators.

“2. Grade-level dwelling units, in housing without elevators, that are first ready for occupancy on or after October 1, 1993, consisting of 3 or more dwelling units.”

(2) EXCEPTIONS. (a) *Buildings without elevator service.* Where no elevator service is provided within a building, only those stories specified in pars. (b) and (c) shall be provided with dwelling units complying with Type A and Type B dwelling units. The minimum number of Type A dwelling units shall be determined in accordance with sub. (1) (a) 2. Where no elevator service is provided in a building, and the ground floor does not contain dwelling units, only those dwelling units located on the lowest floor containing dwelling units shall comply with the requirements of this section.

(b) *One story with type B units.* At least one story containing dwelling units shall be provided with an accessible entrance from the exterior of the building. All entrances on the

accessible story shall be accessible. All dwelling units on that story shall be Type A or Type B dwelling units.

(c) *Additional stories with type B dwelling units.* On all other stories that have a building entrance in proximity to arrival points intended to serve units on that story, as indicated in subd. 1. and 2., all dwelling units shall be Type A or Type B dwelling units. Where no such arrival points are within 50 feet of the entrance, the closest arrival point shall be used unless that arrival point serves the story specified in par. (b).

1. Where the slopes of the undisturbed site measured between the planned entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance are 10 percent or less, all dwelling units served by that entrance on that story shall be Type A or Type B dwelling units.

2. Where the slopes of the planned finished grade measured between the entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance are 10 percent or less, all dwelling units served by that entrance on that story shall be Type A or Type B dwelling units.

(d) *Multistory dwelling units.* 1. Multistory dwelling units located in buildings without elevator service are not required to comply with the requirements for Type A or Type B dwelling units.

2. Where a multistory dwelling unit is located in a building with elevator service, the dwelling units on the story that is served by the elevator shall comply with the requirements for a Type B dwelling unit. The story of the dwelling unit served by the elevator shall be the primary entry to the unit, shall comply with the requirements for type A or type B dwelling units, and shall have a toilet facility.

(e) *Elevator service to the lowest story with dwelling units.* Where elevator service in a building provides an accessible route only to the lowest story containing dwelling units, only the dwelling units on that story are required to be Type A or Type B units.

(3) SITE IMPRACTICALITY EXCEPTIONS. Pursuant to ss. 101.132 (2) (b) 4. and (c) 2., Stats., the owner may request a reduction in accessible dwelling units due to site impracticality through the petition for variance procedures specified in ch. Comm 61. The reduction may not be less than 50 percent of the dwelling units required to be accessible in par. (a).

Note: Section 101.132 (2) (b) 4., Stats., reads as follows: “The department may grant a variance or waiver from the requirements under this paragraph relating to exterior accessibility using the standards and procedures under par. (c).”

Note: Section 101.132 (2) (c) 2., Stats., reads as follows: “The department may grant a variance from the requirements relating to exterior accessibility under par. (a) 1. or (b), or from administrative rules promulgated under par. (e) 2., if the person designing, constructing or remodeling the housing shows that meeting those requirements is impractical because of the terrain or unusual characteristics of the site. The department shall use a slope analysis of the undisturbed site for covered multifamily housing under par. (a) or the existing site for

remodeling under par. (b) to determine the minimum number of accessible entrances at each site, with a minimum goal of exterior accessibility of 50% of the dwelling units of covered multifamily housing at one site. The department may impose specific conditions in granting a variance to promote exterior accessibility of the housing to persons with disabilities. If the department finds exterior site accessibility is impractical to all dwellings units at a site, it may grant a waiver from the requirements under par. (a) 1. or (b).”

Comm 62.1108 Unisex toilet and bathing rooms. Substitute the following wording for the requirements in IBC section 1108.2.1 and the exception:

(1) **GENERAL.** Except as specified in sub. (2), in recreational facilities where separate-sex bathing rooms are provided, an accessible unisex bathing room shall be provided. Fixtures located within unisex toilet and bathing rooms shall be included in determining the number of fixtures provided in an occupancy.

(2) **EXCEPTION.** Where each separate-sex bathing room has only one shower or bathtub fixture, a unisex bathing room is not required.

Comm 62.1109 Emergency escape and rescue. (1) SIGNS. Substitute the following wording for the requirements in IBC section 1109.1:

(a) *General.* Except as specified in par (b), required accessible elements shall be identified by the International Symbol of Accessibility at the following locations:

1. Accessible passenger loading zones.
2. Accessible areas of refuge required by IBC section 1103.2.13.5.
3. Accessible rooms where multiple single-user toilet or bathing rooms are clustered at a single location.
4. Accessible entrances where not all entrances are accessible.
5. Accessible check-out aisles where not all aisles are accessible. The sign, where provided, shall be above the check-out aisle in the same location as the check-out aisle number or type of check-out identification.
6. Unisex toilet and bathing rooms.
7. Accessible dressing, fitting, and locker rooms where not all such rooms are accessible.

(b) *Exception.* Accessible parking spaces required in IBC section 1106 shall be identified with a sign complying with the accessible parking sign requirements specified in s. Trans 200.7.

(2) **OTHER SIGNS.** Substitute the following wording and informational note for the introductory paragraph in IBC section 1109.3: Signage providing directional information,

information about functional spaces, or signage indicating special accessibility provisions shall be provided as follows:

Note: Refer to s. 101.123, Stats., for requirements for designating smoking areas.

Comm 62.1203 Interior environment Substitute the following wording for the requirements and exception in IBC section 1203.1: Interior spaces intended for human occupancy shall conform to the IMC.

Comm 62.1205 Court Drainage. Substitute the following wording and informational note for the requirements in IBC section 1205.3.3: The bottom of every court shall be properly graded and drained.

Note: See ch. Comm 82 for requirements for storm water piping.

Comm 62.1209 Toilet Rooms. These are department rules in addition to the requirements in IBC section 1209.5:

(1) **PRIVACY AND ACCESS.** Every toilet room shall be enclosed and separated from other areas of the building in a manner that will ensure privacy of the users of the toilet rooms. Restriction of access to toilet rooms, such as by use of key locks or other similar devices, is prohibited, except as provided in sub. (2).

(2) **EXCEPTIONS** (a) Toilet rooms for a service or filling station that are accessed from the exterior may be key locked.

(b) A self-service filling station that has a key- or card-operated fuel dispensing device which can be used while the station is unattended by an employee is not required to have toilet rooms available during the unattended periods.

(c) Single-occupant toilet rooms may have privacy locks.

Comm 62.1403 Exterior Walls. These are department rules in addition to the requirements in IBC section 1403.3:

(1) **AIR BARRIERS.** (a) Except as specified in sub. (2), a durable air retarder shall be provided when a building component or assembly separates interior conditioned space from an exterior wall system.

(b) The air retarder shall be located on the interior side of the wall insulation.

(2) **EXCEPTIONS.** An air retarder is not required in the following locations:

(a) Where other approved means to avoid condensation and frost within the wall assembly are provided.

(b) In plain or reinforced concrete exterior walls that are designed and constructed in accordance with IBC chapter 19.

Note: Although air retarders are to reduce transmission of water vapor by convection (air movement), and vapor retarders are to reduce transmission of water vapor by diffusion, these functions may be combined in a single membrane. In practice, considerably more moisture is transported by convection than by diffusion.

Comm 62.1407 Aluminum composite materials. (1) APPROVAL. Substitute the following wording for the requirements in IBC section 1407.5: Results of approved tests or an engineering analysis shall be made available to the code official upon request to verify compliance with the requirements of IBC chapter 16 for wind loads.

(2) FIRE-RESISTANCE RATING. Substitute the following wording for the requirements in IBC section 1407.8: Where ACM systems are used on exterior walls required to have a fire-resistance rating in accordance with IBC section 704, evidence shall be made available to the code official upon request that the required fire-resistance rating is maintained.

(3) FULL-SCALE TESTS. Substitute the following wording for the requirements in IBC section 1407.9.4: Results of full-scale fire tests, which reflect an end-use configuration and demonstrate that the ACM system in its final form does not propagate flame over the surface or through the core when exposed on the exterior face to a fire source, shall be made available to the code official upon request, for approval. Such testing shall be performed on the ACM system with the ACM in the maximum thickness intended for use.

Comm 62.1505 Roof covering classification. The requirements in Footnote a in IBC Table 1505.1. are not included as part of this code.

Comm 62.1506 Roof covering materials. Substitute the following wording for the requirements in IBC section 1506.3: Roof covering materials shall conform to the applicable standards listed in IBC chapter 15.

Comm 62.1603 Construction documents. (1) LIVE LOADS POSTED. Substitute the following wording for the requirements in IBC section 1603.3: Where the live loads for which each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 100 pounds per square foot, such design live loads shall be conspicuously posted by the owner in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

(2) OCCUPANCY PERMITS. The requirements in IBC section 1603.4 are not included as part of this code.

Comm 62.1604 In-situ load tests. Substitute the following wording for the requirements in IBC section 1604.6: The building official is authorized to require an engineering analysis or a load test, or both, of any construction whenever there is reason to question the safety of the construction for the intended occupancy.

Comm 62.1607 Truck and bus garages. Substitute the following wording for the requirements in IBC section 1607.6: Minimum live loads for garages having trucks or buses shall be as specified in IBC Table 1607.6, but shall not be less than 50 pounds per square foot. Actual loads shall be used where they are greater than the loads specified in the table.

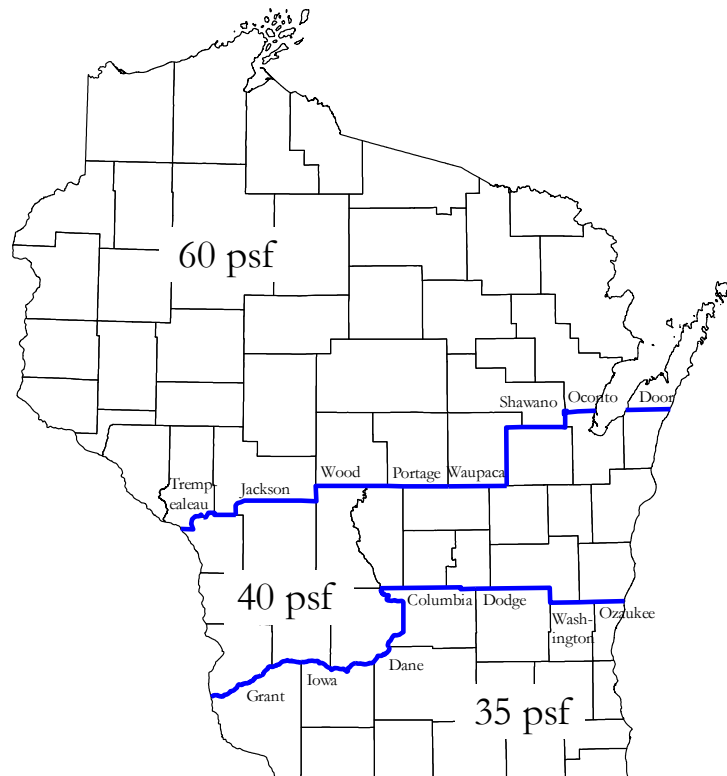
Comm 62.1608 Snow Loads. (1) GROUND SNOW LOAD. This is a department alternative to the requirements in IBC section 1608.2:

(a) A ground snow load of 35 pounds per square foot may be assumed for the south zone in Figure 62.16-1.

(b) A ground snow load of 40 pounds per square foot may be assumed for the middle zone in Figure 62.16-1.

(c) A ground snow load of 60 pounds per square foot may be assumed for the north zone in Figure 62.16-1.

**Figure 62.16-1
Ground Snow Load Zones**



(2) SNOW EXPOSURE FACTOR. This is a department alternative to the requirements in IBC section 1608.3.1: A snow exposure factor of 1.0 may be used for any flat roof.

Comm 62.1609 Determination of wind loads. This is a department alternative to the requirements in IBC section 1609.1.1: For buildings that meet all of the following conditions, wind loads may be determined by applying only Table 6-2 in ASCE 7-98:

- (1) The total building volume is less than 50,000 cubic feet.
- (2) The building height is less than 30 feet.
- (3) The wind exposure is Category C.
- (4) Roof overhangs are designed to resist an uplift load of at least 30 pounds per square foot.

Comm 62.1610 Soil lateral loads. Substitute the following Table for IBC Table 1610.1

**Table 62.1610
Soil Lateral Load**

| Description of Backfill Material ^a | Unified Soil Classification | Active Condition ^b Design Lateral Soil Load psf Per Foot of Depth | At-rest Condition ^c Design Lateral Soil Load psf Per Foot of Depth |
|--|-----------------------------|--|---|
| Well-graded clean gravels; gravel & sand mixes | GW | 30 | 50 |
| Poorly graded clean gravels; gravel & sand mixes | GP | 30 | 50 |
| Silty gravel, poorly graded gravel & sand mixes | GM | 40 | 60 |
| Clayey gravel, poorly graded gravel & clay mixes | GC | 45 | 65 |
| Well-graded clean sand; gravel & sand mixes | SW | 30 | 50 |
| Poorly graded clean sand; sand & gravel mixes | SP | 30 | 50 |
| Silty sands, poorly graded sand & silt mixtures | SM | 45 | 65 |
| Sand-silt-clay mix with plastic fines | SM-SC | 45 | 65 |
| Clayey sand, poorly graded sand & clay mixes | SC | 60 | 100 |
| Inorganic silts and clayey silts | ML | 45 | 100 |
| Mixture of inorganic silt and clay | ML-CL | 60 | 100 |
| Inorganic clays of medium plasticity | CL | 60 | 100 |
| Organic silt and silty clay, low plasticity | OL | d | d |
| Inorganic clayey silt, elastic silt | MH | d | d |
| Inorganic clays of high plasticity | CH | d | d |
| Organic clays and organic silty clay | OC | d | d |

^aThe definition and classification of soil materials shall be in accordance with ASTM D 2487.

^bWhere wall is expected to deflect a minimum of 0.001 times the retained soil height. Design lateral soil loads are for moist conditions for the specified soil at typical specified compacted densities. Actual field conditions shall govern. The lateral pressure of improperly drained, submerged, or saturated soils shall include the buoyant unit soil weight times appropriate K_a , plus the hydrostatic pressure. K_a is the coefficient of active earth pressure.

^cWhere wall is expected to deflect less than 0.001 times the retained soil height. Design lateral soil loads are for moist conditions for the specified soil at typical specified compacted densities. Actual field conditions shall

govern. The lateral pressure of improperly drained, submerged, or saturated soils shall include the buoyant unit soil weight times appropriate K_o , plus the hydrostatic pressure. K_o is the coefficient of earth pressure at rest.

^dUnsuitable as backfill material.

Comm 62.1612 Flood loads. The requirements in IBC section 1612 are not included as part of this code.

Comm 62.1614 Earthquake loads – general. Substitute the following wording for the requirements, but not the exceptions, in IBC section 1614.1:

(1) Every structure, and portion thereof, shall as a minimum, be designed and constructed to resist the effects of earthquake motions and assigned a Seismic Design Category as set forth in IBC section 1616.3. Structures determined to be in Seismic Design Category A, and the following structures, need only comply with the requirements in IBC section 1616.4.

(a) Structures north of the 4% g contour line in IBC Figure 1615(2).

(b) Structures south of the 4% g contour line in IBC Figure 1615(2) that have a site class of A to C in IBC Table 1615.1.1.

(c) Structures south of the 4% g contour line in IBC Figure 1615(2) which are classified as Category IV in IBC Table 1604.5 and which have a site class of D, E or F in IBC Table 1615.1.1.

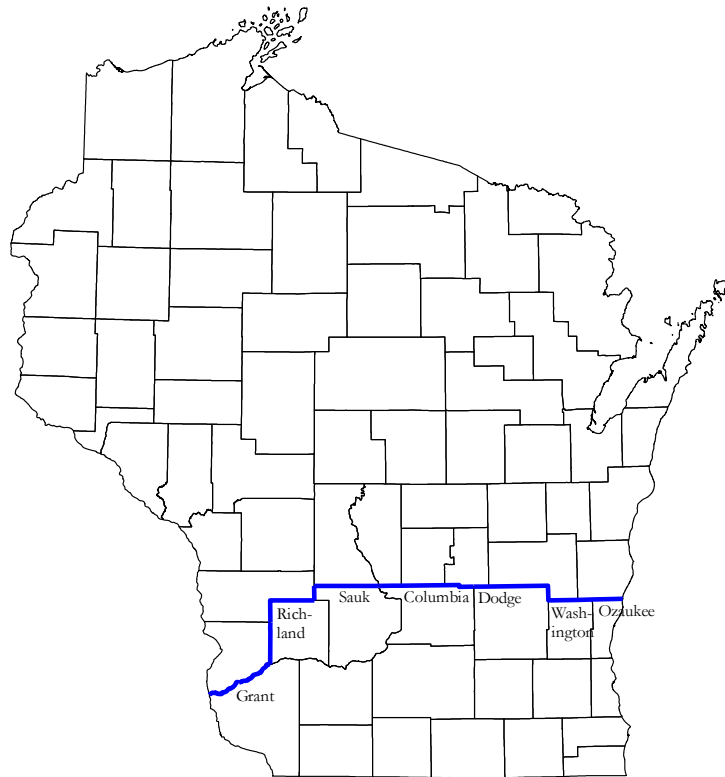
(2) Structures south of the 4% g contour line in IBC Figure 1615(2) which are classified as Category I, II or III in IBC Table 1604.5 and which have a site class of D, E or F in IBC Table 1615.1.1 shall comply with the applicable design requirements in IBC sections 1616 through 1623.

Comm 62.1615 Earthquake loads – site ground motion. These are department alternatives to the contour lines shown in IBC Figures 1615(1) and (2):

(1) The contour line in IBC Figure 1615(1) that extends through southern Rock, Walworth, and Kenosha Counties may be ignored.

(2) The 4% g contour line in IBC Figure 1615(2) may be applied as occurring in the location shown in Figure 62.16–2.

**Figure 62.16–2
Alternate 4% g Contour Location**



Comm 62.1621 Component certification. The requirements in IBC section 1621.3.5 are not included as part of this code.

Comm 62.1700 Structural tests and special inspections. The requirements in IBC chapter 17, except for the requirements in IBC section 1715, are not included as part of this code.

Comm 62.1802 Foundation and soil investigation. (1) GENERAL. Substitute the following wording for the requirements in IBC section 1802.1: Foundation and soils investigations shall be conducted in conformance with IBC sections 1802.2 through 1802.6.

(2) WHERE REQUIRED. Substitute the following wording for the requirements, but not the exception, in IBC section 1802.2: The owner or applicant shall make a foundation and soils investigation available to the building official, upon request, where required in IBC sections 1802.2.1 through 1802.2.7.

(3) QUESTIONABLE SOIL. Substitute the following wording for the requirements in IBC section 1802.2.1: Where the safe-sustaining power of the soil is in doubt, or where a load-bearing value superior to that specified in this code is claimed, an investigation complying with the provisions of IBC sections 1802.4 through 1802.6 shall be made.

(4) **EXPANSIVE SOILS.** Substitute the following wording for the requirements in IBC section 1802.2.2: In areas likely to have expansive soil, soil tests shall be conducted to determine where such soils do exist.

Comm 62.1805 Alternate setback and clearance. Substitute the following wording for the requirements in IBC section 1805.3.5: Alternate setbacks and clearances are permitted, subject to the approval of the building official.

Comm 62.1807 Pier and pile foundations (1) DEFINITION OF NEUTRAL PLANE. This is a department definition in addition to the definitions in IBC section 1807.1: **NEUTRAL PLANE.** A pile's neutral plane is the level at which drag load, accumulated from the top down, added to the long-term static service load, equals the upward acting shaft resistance accumulated from the bottom up, added to the pile's toe resistance.

(2) **DOWNDRAG.** This is a department rule in addition to the requirements in IBC section 1807.2.1: Investigations and reports for pier or pile foundations shall include analysis of whether downdrag is anticipated. Where downdrag is anticipated, the report shall include a determination of the position of the pile's neutral plane, an estimate of the soil settlement at the neutral plane, and a determination of the maximum load at the neutral plane.

(3) **DETERMINATION OF ALLOWABLE LOADS.** Substitute the following wording for the requirements in IBC section 1807.2.8.1:

(a) The allowable axial and lateral loads on piers or piles shall be determined by an approved formula, load tests or static analysis.

(b) The factor of safety to be used for pier or pile design shall depend on the extent of field testing performed to verify capacity.

(c) If the ultimate capacity is assessed solely by static analysis, a minimum factor of safety of 3.0 shall be applied to the ultimate capacity to determine allowable load capacity.

(d) If only static analysis and dynamic field testing are performed, a minimum factor of safety of 2.5 shall be applied to the ultimate capacity to determine load capacity.

(e) If one or more static load tests are performed, in addition to the analysis and tests described above, a minimum factor of safety of 2.0 shall be applied to the ultimate allowable capacity.

(f) A minimum factor of safety of 2.0 shall be used for occupiable structures provided that all of the conditions in subds. 1 to 5 are met. A minimum factor of safety of 1.5 may be used for non-occupiable structures, provided that the deep foundations are required only to control settlement, and it can be demonstrated that deep foundations are not required to prevent a bearing capacity failure.

(4) **LOAD TESTS.** This is a department alternative to the requirements in IBC section 1807.2.8.3: The ultimate capacity of the pile shall be defined as the load at which the average pile head deflection is defined by the following equation:

$$\delta = (Pl/AE) + 0.15'' + (B/120)$$

Where:

δ = average pile head deflection, inches

P = applied load, pounds

l = pile length, inches

A = transformed pile area of pile (to steel)

E = modulus of elasticity (of steel)

B = outside diameter (or width) of pile, inches

The calculation shall be predicated on an assumed end-bearing condition.

(5) **PILES IN SUBSIDING AREAS.** Substitute the following wording for the requirements in IBC section 1807.2.11:

(a) Where piles are driven through subsiding fills or other subsiding strata and derive support from underlying firmer materials, consideration shall be given to the downward drag load that may be imposed on the piles by the subsiding upper strata.

(b) Where the influence of subsiding fills is considered as imposing loads on the pile, the allowable stresses specified in this chapter are permitted to be increased where satisfactory substantiating data are submitted.

(c) The position of the pile's neutral plane shall be determined, and the settlement of the soil at the level of the neutral plane shall be estimated. The maximum load in the pile, which occurs at the neutral plane, shall be determined.

Comm 62.1808 Driven pile foundations. Substitute the following wording for the requirements in IBC section 1808.1.3: Any sudden decrease in driving resistance of an end-supported timber pile shall be investigated with regard to the possibility of damage. If the sudden decrease in driving resistance cannot be correlated to load-bearing data, the pile shall be removed for inspection or rejected, or shall be assigned a reduced capacity commensurate with the loss of end-bearing in lieu of removing or rejecting the pile.

Comm 62.1809 Concrete pile foundations. (1) DIMENSIONS FOR DRILLED OR AUGERED UNCASSED PILES. Substitute the following wording for the exception in IBC section 1809.3.2: The length of the pile is permitted to exceed 30 times the diameter, provided that the design and installation of the pile foundation is under the direct supervision of a registered design professional knowledgeable in the field of soil mechanics and pile foundations.

(2) DIMENSIONS FOR DRIVEN UNCASSED PILES. Substitute the following wording for the exception in IBC section 1809.4.2: The length of the pile is permitted to exceed 30 times the diameter, provided that the design and installation of the pile foundation is under the direct supervision of a registered design professional knowledgeable in the field of soil mechanics and pile foundations.

Comm 62.1914 Shotcrete clearance. The exception in IBC section 1914.4.2 is not included as part of this code.

Comm 62.1916 Column approvals. Substitute the following wording for the requirements in IBC section 1916.6.: Details of column connections and splices shall be shop-fabricated by approved methods and testing. Shop-fabricated concrete-filled pipe columns shall be inspected by a representative of the manufacturer at the plant.

Comm 62.2101 Masonry construction materials. (1) CONSTRUCTION DOCUMENTS. The requirements in IBC section 2101.3 are not included as part of this code.

(2) FIREPLACE DRAWINGS. The requirements in IBC section 2101.3.1 are not included as part of this code.

Comm 62.2103 Cast stone masonry units. These are department rules in addition to the requirements in IBC section 2103.3:

(1) Cast stone masonry units covered under this category are homogeneous or faced, dry cast concrete products other than conventional concrete masonry units (brick or block), but of similar size.

(2) Cast stone masonry units shall be made with portland cement, water and suitable mineral aggregates, with or without admixtures, and reinforced if required.

(3) Cast stone masonry units shall have a minimum compressive strength of 6500 psi and a maximum water absorption of 6% when tested as 2- x 2-inch cylinders or cubes.

Comm 62.2105 Masonry quality. The requirements in IBC section 2105.1 are not included as part of this code.

Comm 62.2108 Quality assurance provision. The requirements in IBC section 2108.2 are not included as part of this code.

Comm 62.2109 Empirical design of masonry. (1) BEARING ON MASONRY. This is a department rule in addition to the requirements in IBC section 2109.1: Lintels shall be considered structural members and shall be designed in accordance with the applicable provisions of IBC chapter 16.

(2) OPENINGS. This is a department rule in addition to the requirements in IBC section 2109.4.1: Unless evidence is provided to show that openings do not cause lateral

stability and stress requirements to be exceeded, the amount of openings in a masonry wall shall not exceed the limits set forth in Table 62.2109-1.

**Table 62.2109-1
Maximum Ratio of Laterally Unsupported Height or
Length to Thickness for Exterior Walls With Openings[†]**

| Type of Masonry | Percent of Openings at Any Horizontal Plane of Wall | | | |
|---|---|----|----|----------------------------|
| | 20 | 40 | 60 | Over 60 |
| Single wythe walls of solid or grouted walls of solid units | 20 | 16 | 12 | Submit design calculations |
| All other masonry | 18 | 14 | 10 | |

[†]The percentage of openings shall be calculated for each 100 lineal feet of wall or portion thereof at any horizontal plane of wall.

(3) JOINTING. These are department rules in addition to the requirements in IBC section 2109:

(a) *Expansion and shrinkage.* Joints commensurate with lateral stability requirements shall be installed in all exterior masonry to allow for expected growth of clay products and shrinkage of concrete products.

(b) *Vertical jointing.* Vertical movement joints shall be provided at a spacing in compliance with Table 62.2109-2.

**Table 62.2109-2
Maximum Spacing Of Exterior Masonry Movement Joints
Between Unrestrained Ends[†] (Feet)**

| Loading Conditions | Type of Material | Openings (Percent of Total Wall Area) | | | |
|-----------------------|------------------|---------------------------------------|-----------------|----------------|-----------------|
| | | 0 to 20 | | More than 20 | |
| | | Joint to Joint | Joint to Corner | Joint to Joint | Joint to Corner |
| Load-bearing | Clay units | 140 | 70 | 100 | 50 |
| | Concrete units | 60 | 30 | 40 | 20 |
| Nonload-bearing walls | Clay units | 100 | 50 | 60 | 40 |
| | Concrete units | 50 | 25 | 30 | 20 |

[†]Jointing required is a minimum and is not intended to prevent minor cracking. The distances given for maximum spacing of joints are for a single wall plane. For composite walls, the maximum spacing of joints shall be governed by the masonry material type used in the exterior wythe.

Note: To accomplish the intended purpose, joints should be located at critical locations, such as changes in building heights, changes in framing systems, columns built into exterior walls, major wall openings, and changes in materials.

(c) *Horizontal jointing.* Where supports such as shelf angles or plates are required to carry the weight of masonry above the foundation level, a pressure-relieving joint shall be provided between the structural support and any masonry that occurs below this level. The joint width shall be such as to prevent any load being transmitted from the support to any

element directly below. All mortar and rigid materials shall be kept out of this joint. This type of joint shall be provided at all such supports in a concrete frame structure where clay masonry is exposed to the weather.

Comm 62.2208 Welding of structural steel. Substitute the following wording and informational note for the requirements in IBC section 2208.1: The details of design, workmanship and technique for welding, inspection of welding, and qualifications of welding operators shall conform to the requirements of the specifications listed in IBC sections 2204, 2205, 2206 and 2207.

Note: The rules pertaining to registration of structural welders are specified in ch. Comm 5.

Comm 62.2303 Truss design drawings. The requirements in IBC section 2303.4.1 are not included as part of this code.

Comm 62.2304 Girder ends. This is a department rule in addition to the requirements in IBC section 2304.11.2.4: A moisture barrier shall be provided between an untreated or nondurable wood girder and an exterior masonry or concrete bearing surface.

Comm 62.2503 Gypsum board and plaster. The requirements in IBC section 2503.1 are not included as part of this code.

Comm 62.2900 Additional criteria for toilets. These are department rules in addition to the requirements in IBC chapter 29:

(1) **MAINTENANCE.** Every toilet room and every part thereof shall be kept clean and in good repair.

(2) **SERVICE SINK.** In every building where a service sink is required by Table 2902.1, the service sink shall be located in a service closet or room that is provided with the supplies necessary for the sanitary upkeep of the toilet rooms.

(3) **PERMANENT AND PORTABLE OUTDOOR TOILETS.** (a) *General.* Where local conditions or situations make it impractical to install a private onsite wastewater treatment system, permanent or portable outdoor toilets, or other sanitation systems or devices as described in ch. Comm 91, may be used, except as specified in par. (b).

Note: See ch. Comm 83 for detailed requirements for private onsite wastewater treatment systems.

(b) *Exception.* For places of employment for more than 10 persons, schools larger than 2 rooms, and apartment houses, water-flush toilets shall be provided, unless outdoor toilets or other sanitation systems or devices are permitted in writing by the department.

(c) *Permanent outdoor toilets.* Permanent outdoor toilets, consisting of composting toilet systems, incinerating toilets, or privies shall comply with ch. Comm 91, s. Comm 62.1209, and this section.

1. A permanent outdoor toilet shall be provided with a suitable approach, such as a concrete, gravel, or cinder walk.

2. All windows, ventilators, and other openings for permanent outdoor toilets shall be screened to prevent the entrance of flies, and all doors shall be self-closing.

(d) *Portable outdoor toilets.* 1. No portable outdoor toilet may be erected or maintained within 50 feet of any well; within 10 feet of the line of any street or public thoroughfare, unless vehicular traffic has been detoured while the portable toilet is in use; within 5 feet of the property line between premises; or within 25 feet of a door, window, or other outdoor opening of any building.

2. A portable outdoor toilet shall be stabilized to prevent it from tipping over.

3. A portable outdoor toilet shall be located with an approach such that access is unobstructed and free of brush, debris, and standing water.

Note: Chapter Comm 91 contains requirements for storage chambers of portable toilets.

Note: Chapters NR 113 and NR 114 contain requirements for servicing portable toilets.

(4) **ENCLOSURE OF FIXTURES.** (a) Water closets and urinals within a toilet room shall be arranged to ensure privacy. Except as provided in par. (b), each water closet shall occupy a separate compartment, with walls or partitions and a door enclosing the fixtures to ensure privacy. Urinals shall be placed against walls at least 6 feet 8 inches high and arranged individually with or without partitions.

(b) 1. Water closet compartments may be omitted in a single-occupant toilet room having a door with a privacy lock.

2. Toilet rooms located in day-care and child-care facilities and containing two or more water closets may have one water closet without an enclosing compartment.

Comm 62.2902 Plumbing fixtures. (1) MINIMUM NUMBER OF FIXTURES. (a) *Exception.* This is a department exception to the requirements in IBC section 2902.1: Where more than one water closet is required for males, urinals may be substituted for up to 50 percent of the required number of water closets.

(b) *Additional fixtures.* These are department informational notes to be used under IBC sections 2902.1 and 2902.2:

Note: Additional plumbing fixtures may be required for employees by the U.S. department of labor, occupational safety and health act (OSHA) regulations.

Note: Additional plumbing fixtures may be required by the department of health and family services for restaurants, mobile home parks, camping grounds, camping resorts, recreational camps and educational camps.

Note: Chapter Comm 90 also has requirements for minimum numbers of sanitary fixtures for a public swimming pool, as based on the pool area. For some buildings, the minimum number of sanitary fixtures determined in that manner may be larger than the minimum number determined in accordance with this section. Compliance with this section does not relieve an owner from complying with ch. Comm 90.

(2) LAVATORIES FOR TOILET ROOMS. This is a department rule in addition to the requirements in IBC section 2902.1: At least one lavatory shall be provided in each toilet room or in a sex-designated lounge adjacent to the toilet room. If a multiple-use lavatory is provided, 24 lineal inches of wash sink, or 20 inches measured along the edge of a circular basin will be considered equivalent to one lavatory.

(3) SIGNAGE FOR TOILET ROOMS. This is a department rule in addition to the requirements in IBC section 2902.2: Toilet rooms shall be designated by legible signs.

(4) PUBLIC FACILITIES. This is a department alternative to the requirements in IBC section 2902.6: Toilet rooms may be omitted in a small retail or mercantile building where all of the following requirements are met:

(a) No more than 25 occupants are accommodated.

(b) Other restrooms are conveniently located and available to the patrons and employees during all hours of operation.

(c) The omission is approved in writing by the local unit of government.

(d) A copy of the written approval from the local unit of government is provided to the department or its authorized representative upon request.

(5) LOCATION OF RESTAURANT TOILET ROOMS. This is a department informational note to be used under IBC section 2902.6:

Note: Additional location requirements for restaurant toilet rooms may be applied by the department of health and family services.

(6) MERCANTILE TOILET ROOMS. This is a department rule in addition to the requirements in IBC section 2902.6: Toilet rooms for customers in business and mercantile occupancies shall be directly accessible to the customers, rather than accessible through employee work areas.

(7) PAY FACILITIES. Substitute the following wording for the requirements in IBC section 2902.6.2: All toilet facilities shall be free of charge.

Note: Section 146.085, Stats., prohibits charging a fee for the use of toilet facilities and imposes a fine of \$10 to \$50 for violations.

Comm 62.3001 Elevators. (1) SCOPE. Substitute the following wording for the requirements in IBC section 3001.1: This chapter governs the design, construction, installation, alteration and repair of elevators, dumbwaiters, escalators, moving walks and their components.

(2) REFERENCED STANDARDS. Substitute the following wording for the requirements in IBC section 3001.2: Except as otherwise provided for in this code, the design, construction, installation, alteration, repair and maintenance of elevators, dumbwaiters, escalators, moving walks and their components shall comply with ch. Comm 18.

(3) CHANGE IN USE. Substitute the following wording for the requirements in IBC section 3001.4: A change in use of an elevator from freight to passenger, passenger to freight, or from one freight class to another freight class shall comply with ch. Comm 18.

Comm 62.3004 Hoistways. (1) VENTING. This is a department rule in addition to the requirements in IBC section 3004.3: A ventilation opening in a hoistway wall, where provided, shall have guards securely anchored to the supporting structure inside the hoistway. The guards shall consist of a wire-mesh screen of at least 0.0915-inch diameter steel wire with openings that will reject a ball one-inch in diameter, or expanded metal screen of equivalent strength and open area.

(2) PLUMBING AND MECHANICAL SYSTEMS. Substitute the following wording for the exception in IBC section 3004.5: Floor drains, sumps and sump pumps shall be permitted at the base of the shaft provided they are directly connected to the storm or clear water drain system. Connection to a sanitary system is prohibited.

Comm 62.3006 Machine rooms. (1) PRESSURIZATION. This is a department exception to the requirements in IBC section 3006.3: An elevator machine room which serves a pressurized elevator hoistway and which is not directly connected to the pressurized elevator shaft is not required to be pressurized.

(2) PLUMBING SYSTEMS. Substitute the following wording for the requirements in IBC section 3006.6: Plumbing systems not used in connection with the operation of the elevator may not be located in elevator equipment rooms.

Comm 62.3100 Assembly seating facilities. This is a department rule in addition to the requirements in IBC chapter 31: Every bleacher, grandstand, or other assembly seating facility that is intended primarily to support persons for the purpose of spectator seating shall be inspected at least annually. Any loose connections and any defective or broken members shall be repaired before the facility is used. All repairs and maintenance shall conform with this code.

Comm 62.3102 Blower equipment. Substitute the following wording for exception 2 in IBC section 3102.8.1.2: Blowers shall be provided with inlet screens, belt guards and other protective devices as required to provide protection from injury.

Comm 62.3103 Temporary structures. This is a department rule in addition to the requirements in IBC section 3103: Under IBC sections 3103.1.1 and 3103.2, the requirements for permits and construction documents for temporary structures are at the option of the local code official.

Comm 62.3104 Pedestrian walkways and tunnels. (1) SEPARATE STRUCTURES. Substitute the following wording for the requirements and exception in IBC section 3104.2: Buildings that are connected in accordance with IBC section 3104 shall be considered to be separate structures.

(2) CONTENTS. The requirements in IBC section 3104.4 are not included as part of this code.

Comm 62.3109 Swimming pool enclosures. Substitute the following informational note for the requirements in IBC section 3109.

Note: See ch. Comm 90 for requirements for swimming pool enclosures.

Comm 62.3200 Encroachments into the public right-of-way. The requirements in IBC chapter 32 are not included as part of this code.

Comm 62.3300 Safeguards during construction. (1) GENERAL. Except for the requirements in IBC sections 3302.1 and 3303.5, the requirements in IBC chapter 33 are not included as part of this code.

(2) PROTECTION OF ADJOINING PROPERTY. This is a department informational note to be used under IBC chapter 33:

Note: Sections 101.111 (1) to (6), Stats., read as follows: “(1) DEFINITION. In this section ‘excavator’ means any owner of an interest in land making or causing to be made an excavation.

“(2) CAVE-IN-PREVENTION. Any excavator shall protect the excavation site in such a manner so as to prevent the soil of adjoining property from caving in or settling.

“(3) LIABILITY FOR UNDERPINNING AND FOUNDATION EXTENSIONS. (a) If the excavation is made to a depth of 12 feet or less below grade, the excavator may not be held liable for the expense of any necessary underpinning or extension of the foundations of buildings on adjoining properties.

“(b) If the excavation is made to a depth in excess of 12 feet below grade, the excavator shall be liable for the expense of any necessary underpinning or extension of the foundations of any adjoining buildings below the depth of 12 feet below grade. The owners of adjoining buildings shall be liable for the expense of any necessary underpinning or extension of the foundations of their buildings to the depth of 12 feet below grade.

“(4) NOTICE. Unless waived by adjoining owners, at least 30 days prior to commencing the excavation the excavator shall notify, in writing, all owners of adjoining buildings of his or her intention to excavate. The notice shall state that adjoining buildings may require permanent protection. The owners of adjoining property shall have access to the excavation site for the purpose of protecting their buildings.

“(5) EMPLOYEES NOT LIABLE. No worker who is an employe of an excavator may be held liable for his or her employer’s failure to comply with this section.

“(6) FAILURE TO COMPLY; INJUNCTION. If any excavator fails to comply with this section, any aggrieved person may commence an action to obtain an order under ch. 813 directing such excavator to comply with this section and restraining the excavator from further violation thereof. If the aggrieved person prevails in

the action, he or she shall be reimbursed for all his or her costs and disbursements together with such actual attorney fees as may be approved by the court.”

Comm 62.3400 Existing structures. (1) EXCLUSIONS. The requirements in IBC sections 3401 to 3405, 3407 and 3409 are not included as part of this code.

(2) COMMUNITY-BASED RESIDENTIAL FACILITIES SERVING 20 OR FEWER UNRELATED RESIDENTS. This is a department rule in addition to the requirements in IBC chapter 34: Where an existing building or portion thereof is converted to a community-based residential facility serving 20 or fewer residents who are not related to the operator or administrator, the building or portion thereof shall be classified as Group R-4. The building or portion thereof shall comply with the provisions of this code that are applicable to a Group R-4 occupancy.

Comm 62.3406 Historic buildings. Substitute the following wording for the requirements in IBC section 3406.1: The construction, repair, alteration, addition, restoration, movement, and change of occupancy of historic structures shall comply with ch. Comm 70.

Comm 62.3408 Accessibility for existing buildings. (1) SCOPE. Substitute the following wording for the requirements and exception in IBC section 3408.1:

(a) *General.* Except as specified in par. (b), the requirements in IBC sections 3408.2 to 3408.7.14 apply to maintenance, change of occupancy, additions and alterations to existing buildings, including those identified as historic buildings.

(b) *Exception.* When dwelling units are remodeled in housing with 3 or more dwelling units, the dwelling units shall comply with sub. (2). The term “remodeled” has the meaning given in s. 101.132 (1) (h), Stats and the term “housing” has the meaning given in s. 106.50 (1) (L), Stats.

Note: Under section 101.132 (1)(h), Stats., “remodel” means to substantially improve, alter, extend or otherwise change the structure of a building or change the location of exits, but does not include maintenance, redecoration, reroofing or alteration of mechanical or electrical systems.

Note: Under section 106.50(1) (L), Stats., “housing” means any improved property, or any portion thereof, including a mobile home as defined in s. 66.0435 (1) (d) or condominium, that is used or occupied, or is intended, arranged or designed to be used or occupied, as a home or residence. “Housing” includes any vacant land that is offered for sale or rent for the construction or location thereon of any building, structure or portion thereof that is used or occupied, or is intended, arranged or designed to be used or occupied, as a home or residence.

(2) ACCESSIBILITY REQUIREMENTS FOR REMODELED HOUSING. These are department rules in addition to the requirements in IBC section 3408.5:

(a) *Remodeled housing.* When housing with 3 or more dwelling units is remodeled, the remodeling percentages specified in s. 101.132 (2) (b), Stats., shall be applied, and the remodeling shall comply with the applicable portions of IBC chapter 11.

Note: Section 101.132 (2)(b), Stats., reads as follows: “1. If more than 50% of the interior square footage of any housing with 3 or more dwelling units is to be remodeled, the entire housing shall conform to the standards in par. (a), regardless of when the housing was first intended for occupancy.

“2. If 25% to 50% of the interior square footage of any housing with 3 or more dwelling units is to be remodeled, that part of the housing that is to be remodeled shall conform to the standards in par. (a), regardless of when the housing was first intended for occupancy.

“3. If less than 25% of the interior square footage of any housing with 3 or more dwelling units is to be remodeled, the remodeling is not subject to the standards in par. (a) unless the alteration involves work on doors, entrances, exits or toilet rooms, in which case the doors, entrances, exits or toilet rooms shall conform to the standards in par. (a) regardless of when the housing was first intended for occupancy.”

(b) *Remodeled buildings with multiple occupancies.* 1. Except as specified in subd. 2., if a building that has multiple occupancies including housing with 3 or more dwelling units is remodeled, an accessible route shall be provided to the remodeled dwelling units.

2. An accessible route to the remodeled area is not required, if the cost to provide the accessible route exceeds 20 percent of the cost of the alteration, as specified in IBC section 3408.6.

(3) **PLATFORM LIFTS.** Substitute the following wording for the requirements in IBC section 3408.7.2: Platform lifts complying with ch. Comm 18 shall be permitted as a component of an accessible route.

Comm 62.3500 Referenced standards. (1) Substitute the following NFPA standards for the corresponding standards listed in IBC chapter 35: NFPA 13-1999, 13R-1999, and 72-1999.

(2) This is a department rule in addition to the requirements in IBC chapter 35: The following NFPA standard is hereby incorporated by reference into this code: NFPA 750-1996.

Comm 62.3600 Appendices. (1) **EXCLUSIONS.** The provisions in IBC Appendices A, B, and D to J are not included as part of this code.

(2) **APPENDIX C.** The provisions in IBC Appendix C apply to Group U agricultural buildings, as described in IBC section C101.1, that are not exempt from this code as outlined in ss. Comm 61.01 and Comm 61.02 (2) and (3).

File ref: IBC/Comm 62C lr