2004 Florida Building Code, Building
Building/Structural Summary

50-minutes (1 CEH)

0701155259

Florida Department of Community Affairs

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- Web: www.floridabuilding.org
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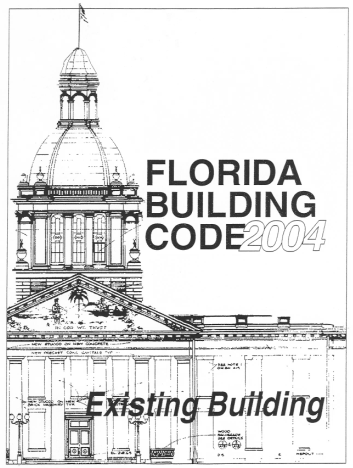
- Must be updated with FBC, 2005 Supplement (located at www.floridabuilding.org under “What’s New”)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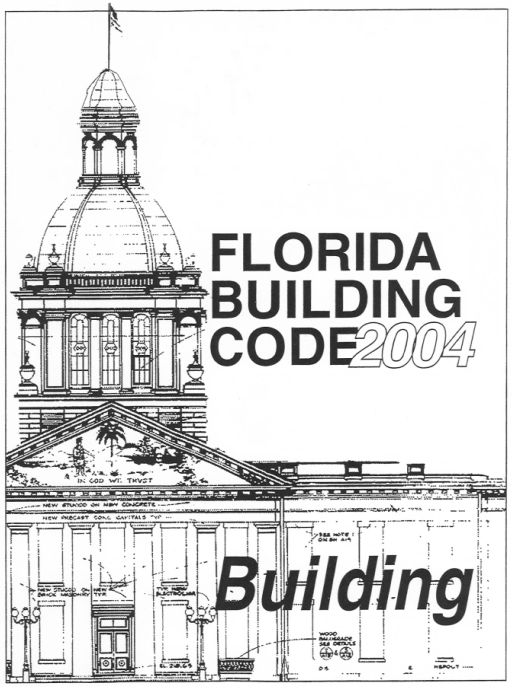
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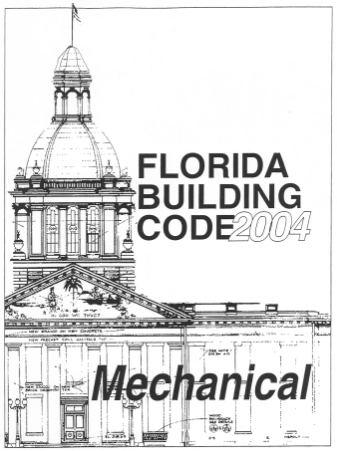
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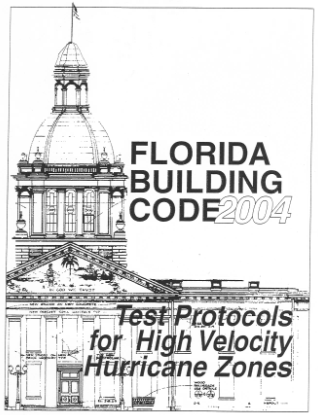
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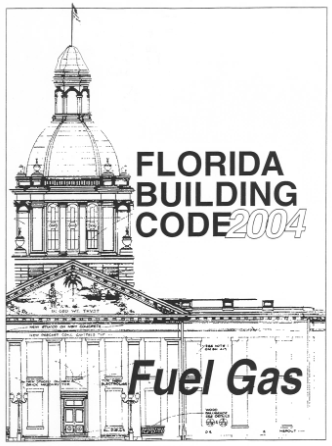
Test Protocols
for High Velocity
Hurricane Zones


FLORIDA
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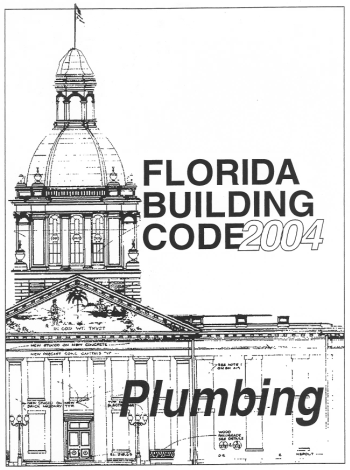
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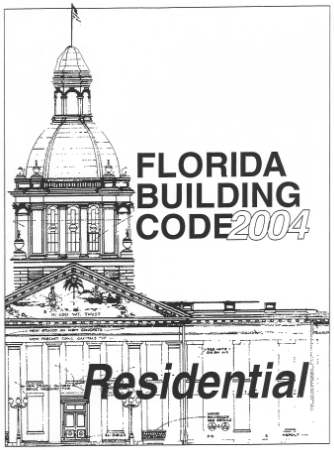
Plumbing


FLORIDA
BUILDING
CODE2004
Residential

Building/Structural Summary

- The following Summary of the *Florida Building Code, Building* provides an overview of changes from the 2001 *Florida Building Code*. The changes are extensive because:
  - The 2003 *International Building Code, Building* is the base code (new for the 2004 version of the *Florida Building Code*)
  - One and two family and townhouse construction will comply with the **2004 *Florida Building Code, Residential*,** which uses the 2003 *International Residential Code* as the base code (new)

Building/Structural Summary

- It is **important** that one and two family and townhouse construction follow the provisions in the 2004 *Florida Building Code, Residential*.
- An overview of the *Florida Building Code, Residential* is separate and provided in:
  - **2004 *Florida Building Code, Residential* Technical Core (4-hour course)**
  - **Summary of the 2004 *Florida Building Code, Residential* (1-hour course)**

Building/Structural Summary

- The *Florida Building Code, Building* provisions apply to every building except:
  - Detached one- and two-family dwellings, and townhouses of not more than 3 stories
    - Refer to the *Florida Building Code, Residential*
  - Existing buildings
    - Refer to the *Florida Building Code, Existing Buildings*.

Building/Structural Summary

- The *Florida Building Code, Residential* refers to the following references in the *Florida Building Code, Building*
  - Chapter 1: Administration
    - Defers to *Florida Building Code, Building,* Chapter 1: Administration
  - Chapter 11: Energy Efficiency
    - Defers to *Florida Building Code, Building*, Chapter 13: Energy Efficiency

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Chapter 1: Administration

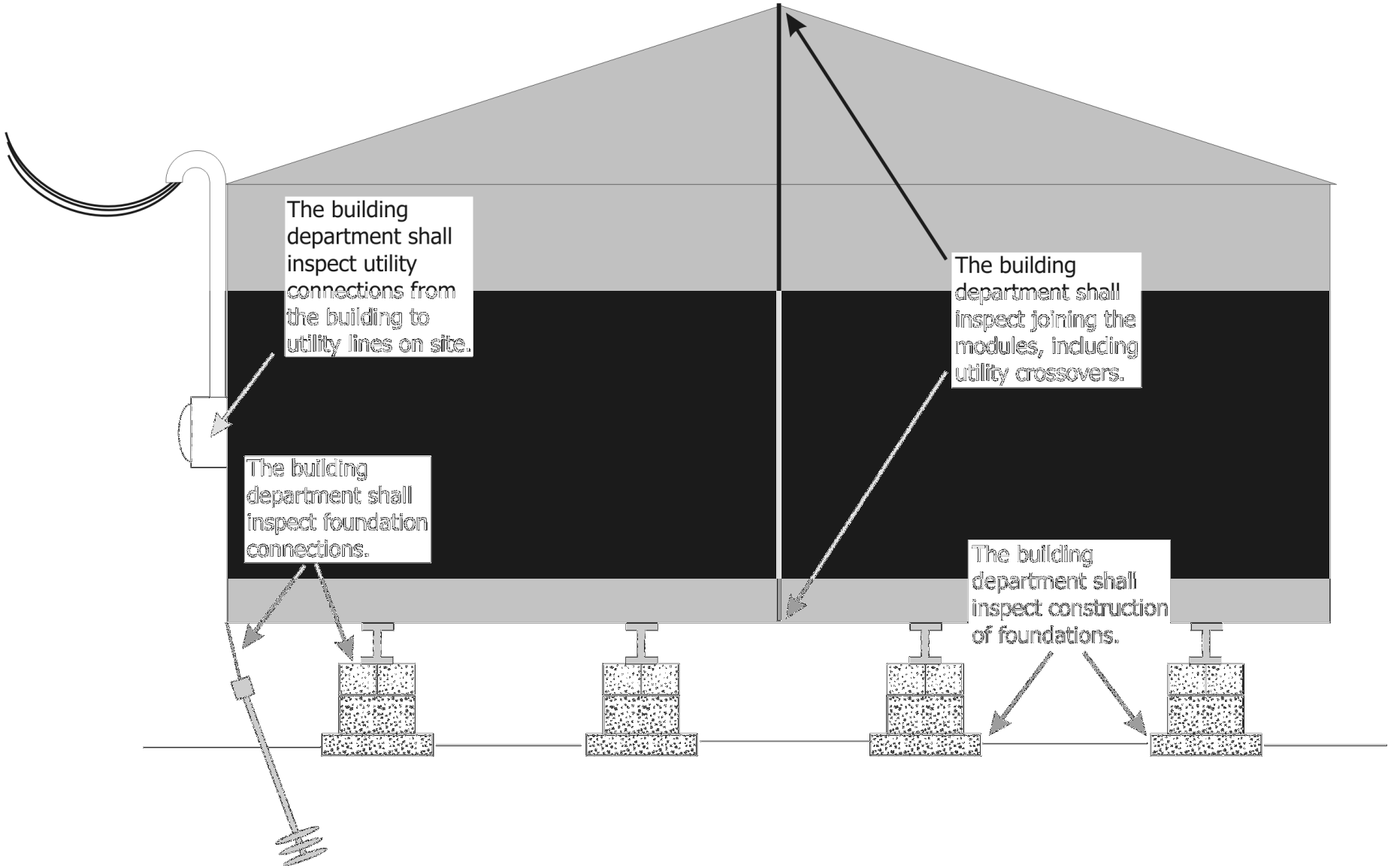
102 APPLICABILITY

- 102.2.6 This section does not apply to swings and other play-ground equipment accessory to a one – or two-family dwelling.
  - **Exception**: Electrical service to such playground equipment shall be in accordance with Chapter 27 of this code.

Chapter 1: Administration

102 APPLICABILITY

- 102.7 Relocation of manufactured buildings.
  - Relocation of an existing manufactured building does not constitute an alteration.
  - A relocated building shall comply with wind speed requirements of the new location, using the appropriate wind speed map. If the existing building was manufactured in compliance with the Standard Building Code (prior to March 1, 2002), the wind speed map of the Standard Building Code shall be applicable.



The building inspector shall inspect installation of items identified on plans as site-installed items, eg. Water coolers/drinking fountains, accessibility ramps, aesthetics/trim boards, fire alarms, fire sprinkler systems, etc.

Chapter 1: Administration

109 INSPECTIONS

- **109.3 Required inspections.**
  - 8. Manufactured buildings.
    - The building department shall inspect construction of foundations; connecting buildings to foundations; installation of parts identified on plans as site installed items, joining the modules, including utility crossovers; utility connections from the building to utility lines on site; and any other work done on site which requires compliance with the Florida Building Code. Additional inspections may be required for public educational facilities. See 423.27.20.

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

OVERVIEW

- Classification based on commonality of fire risk present and expected ability of occupants to respond to this risk.
- **Assembly Group A** is subdivided (5-divisions) by the assembly use.
- **Groups B, M and S** classifications are similar to the Florida Building Code 2001
- **Factory** – three categories (moderate-hazard, low hazard, and special purpose)
- **High-Hazard Group H** – divided into five groups (detonable material, materials that present a rapid burning hazard, materials that readily support combustion, health hazards, and semiconductor fabrication facilities.

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CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

OVERVIEW *(cont'd)*

- **Institutional Group I** – include facilities used for health and wellness care, correctional institutions, mental institutions.
- I-4 Adult care facilities were replaced by **Group D.**
- **Utility and Miscellaneous Group U** – Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy.

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

312 UTILITY & MISCELLANEOUS GROUP U

- Aircraft hangars (accessory to one or two family residence)
- Barns
- Carports
- Fences more than 6 feet in height
- Grain silos, accessory to a residential occupancy
- Greenhouses
- Livestock shelters
- Private garages
- Retaining walls
- Sheds
- Stables
- Tanks
- Towers

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

303 ASSEMBLY GROUP A

- **303.1.1** Restaurants and drinking establishments with an occupant load of less than 50 persons shall be classified as Group M, Mercantile.

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CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

302 CLASSIFICATION

- **302.1.1 Incidental use areas.**
  - Area listed in Table 302.1.1 must be separated or protected, or both, in accordance with the Table, or
  - Must be classified as a mixed occupancy and comply with Section 302.3.
  - Must be classified in accordance with the main occupancy of the portion of the building in which the incidental use area is located.
    - **Exception:** Incidental use areas within and serving a dwelling unit are not required to comply with this section.

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

302 CLASSIFICATION

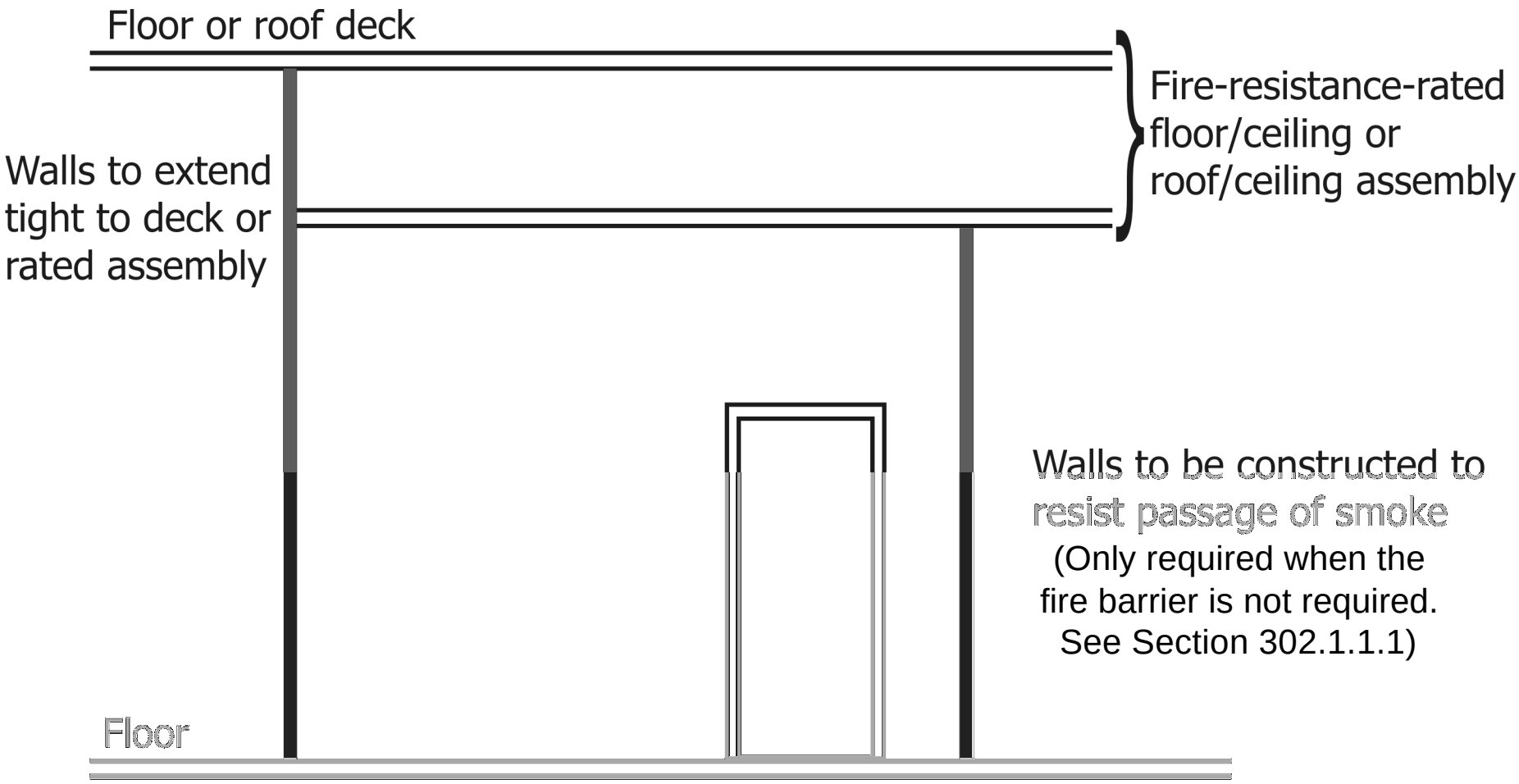
- **302.1.1.1 Separation.**
  - Table 302.1.1
    - The incidental use area must be separated from the remainder of the building with a fire barrier or must be provided with an automatic fire-extinguishing system with smoke barrier. In some cases both are required and sometimes a fire barrier is the only option.
  - Doors:
    - Must be self-closing or automatic-closing upon detection of smoke.
    - Must not have air transfer openings, and
    - Must not have undercut in excess of the clearance

TABLE 302.1.1: INCIDENTAL USE AREAS

ROOM OR AREA	SEPARATION [a]
Furnace room where any piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic fire-extinguishing system
Rooms with any boiler over 15 psi and 10 horsepower	1 hour or provide automatic fire-extinguishing system
Refrigerant machinery rooms	1 hour or provide automatic sprinkler system
Parking garage (Section 406.2)	2 hours; or 1 hour and provide automatic fire-extinguishing system
Hydrogen cut-off rooms	1-hour fire barriers and floor/ceiling assemblies in Group B, F, H, M, S and U occupancies. 2-hour fire barriers and floor/ceiling assemblies in Group A, E, I and R occupancies.
Incinerator rooms	2 hours and automatic sprinkler system
Paint shops, not classified as Group H, located in occupancies other than Group F	2 hours; or 1 hour and provide automatic fire-extinguishing system
Laboratories and vocational shops, not classified as Group H, located in Group E or I-2 occupancies	1 hour or provide automatic fire-extinguishing system
Laundry rooms over 100 square feet	1 hour or provide automatic fire-extinguishing system
Storage rooms over 100 square feet	1 hour or provide automatic fire-extinguishing system
Group I-3 cells equipped with padded surfaces	1 hour
Group I-2 waste and linen collection rooms	1 hour
Waste and linen collection rooms over 100 square feet	1 hour or provide automatic fire-extinguishing system
Stationary lead-acid battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies	1-hour fire barriers and floor/ceiling assemblies in Group B, F, H, M, S and U occupancies. 2-hour fire barriers and floor/ceiling assemblies in Group A, E, I and R occupancies

For SI: 1 sq ft = 0.0929 m^2, 1 lb per sq in = 6.9 kPa, 1 British thermal unit = 0.293 watts, 1 horsepower = 746 watts, 1 gallon = 3.785 L.

[a] Where an automatic fire-extinguishing system is provided, it need only be provided in the incidental use room or area.



Note: Doors shall
- be self-closing or automatic-closing upon detection of smoke
- have no air transfer openings
- have no excessive undercuts

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

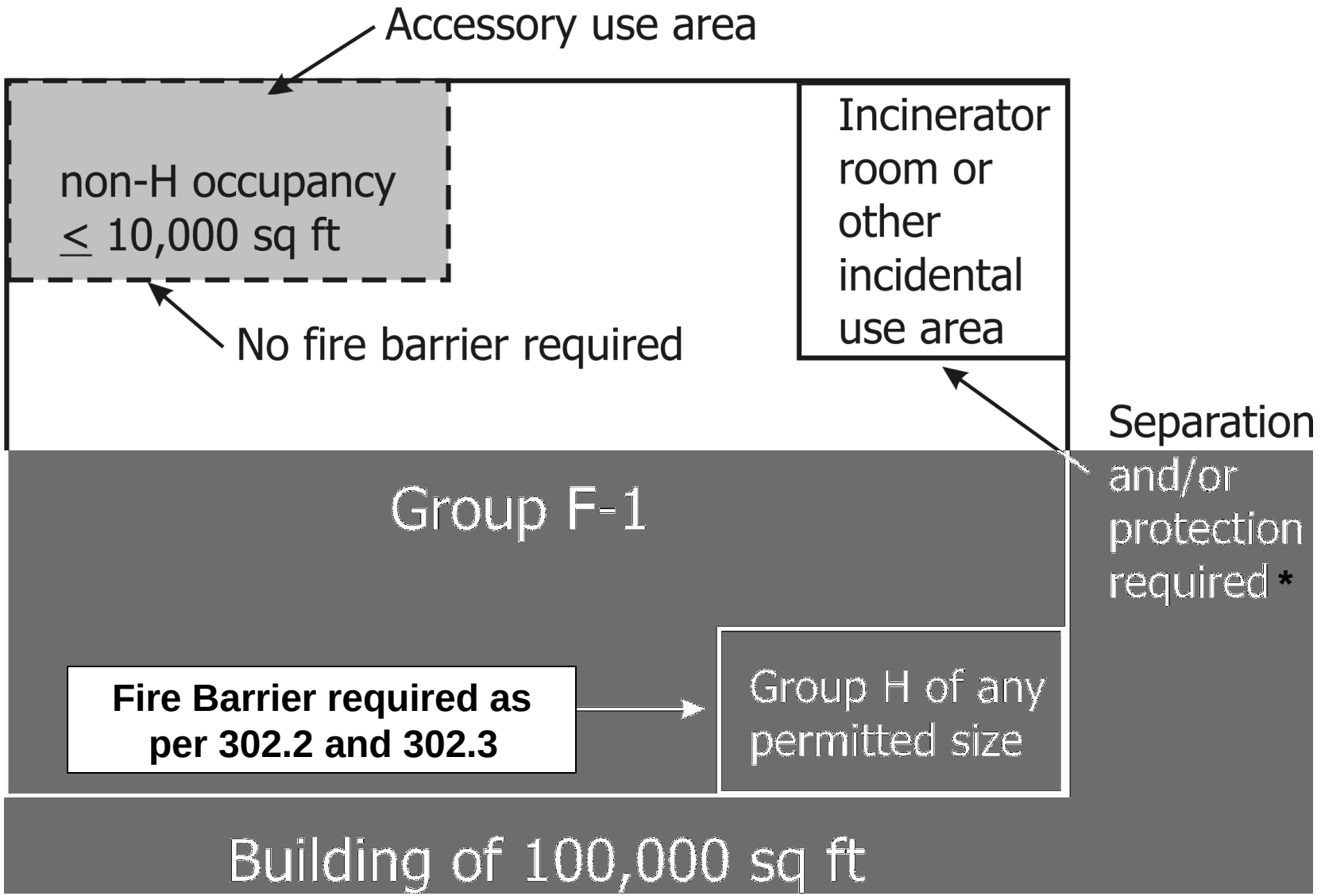
302 CLASSIFICATION

- **302.2 Accessory use areas.**
  - Can be of any occupancy except Group H and incidental use areas.
  - When combined, total areas can not exceed 10% of the area of the story in which they are located and the limitation of Table 503.
  - Are not required to be separated by a fire barrier as per Table 302.3.2.

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

302 CLASSIFICATION

- **302.2.1 Assembly areas.**
  - Accessory assembly areas are not considered separate occupancies when:
  - The floor area is equal to or less than 750 square feet (69.7 m^2).
  - Assembly areas are accessory to Group E.
  - Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100.



***Not required if the building is classified as a mixed occupancy**

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

302 CLASSIFICATION

- **302.3 Mixed occupancies.**
  - When a building is occupied by two or more uses the building must meet:
    - Either one of the exceptions of Section 302.3 or
    - Be designed as:
      - A Non-Separated Use (Section 302.3.1) or
      - Separated Use (Section 302.3.2) or
      - A combination of these sections.

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CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

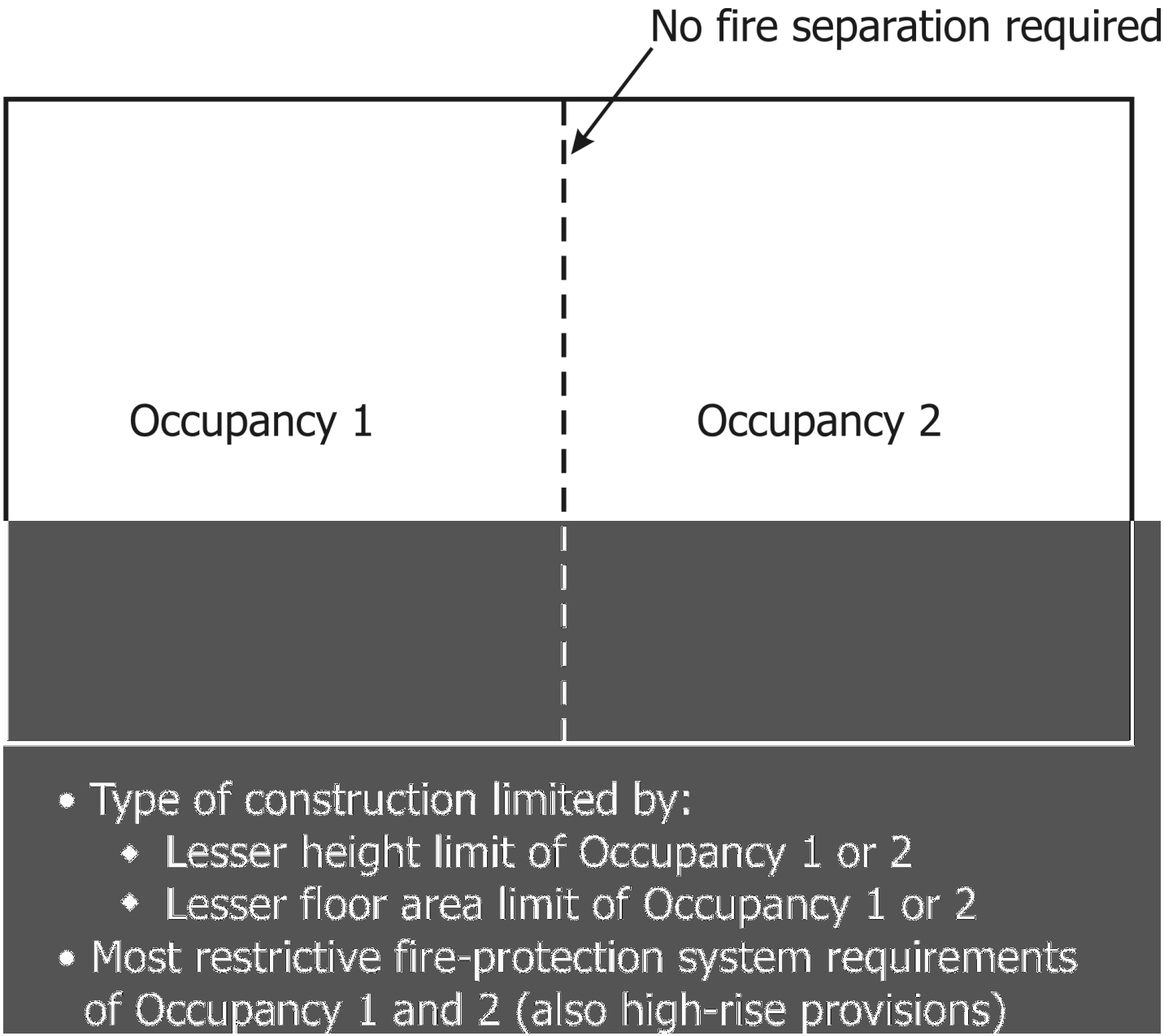
302 CLASSIFICATION

- **302.3 Mixed occupancies.** *(cont'd)*
  - **Exceptions:**
    - 1. Occupancies separated in accordance with Section 508.
    - 2. Areas of Group H-2, H-3, H-4 or H-5 occupancies shall be separated from any other occupancy in accordance with Section 302.3.2.
    - 3. Where required by Table 415.3.2, areas of Group H-1, H-2 or H-3 occupancy shall be located in a separate and detached building or structure.
    - 4. Accessory use areas in accordance with Section 302.2.
    - 5. Incidental use areas in accordance with Section 302.1.1.

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

302 CLASSIFICATION

- **302.3.1 Nonseparated uses.**
  - Each portion of the building must be classified as to use.
  - Required type of construction shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building.
  - Most restrictive type of construction must apply to the entire building.
  - All other code requirements shall apply to each portion of the building based on the use of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to nonseparated uses.
  - Fire separations are not required between uses, except as required by other provisions.


No fire separation required
Occupancy 1
Occupancy 2
• Type of construction limited by:
◆ Lesser height limit of Occupancy 1 or 2
◆ Lesser floor area limit of Occupancy 1 or 2
• Most restrictive fire-protection system requirements of Occupancy 1 and 2 (also high-rise provisions)

CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

302 CLASSIFICATION

- **302.3.2 Separated uses.**
  - Each portion of the building must be classified as to use and shall be completely separated from adjacent areas by fire barrier walls or horizontal assemblies or both having a fire-resistance rating determined in accordance with Table 302.3.2 for uses being separated.
  - Each fire area shall comply with this code based on the use of that space.
  - Each fire area shall comply with the height limitations based on the use of that space and the type of construction

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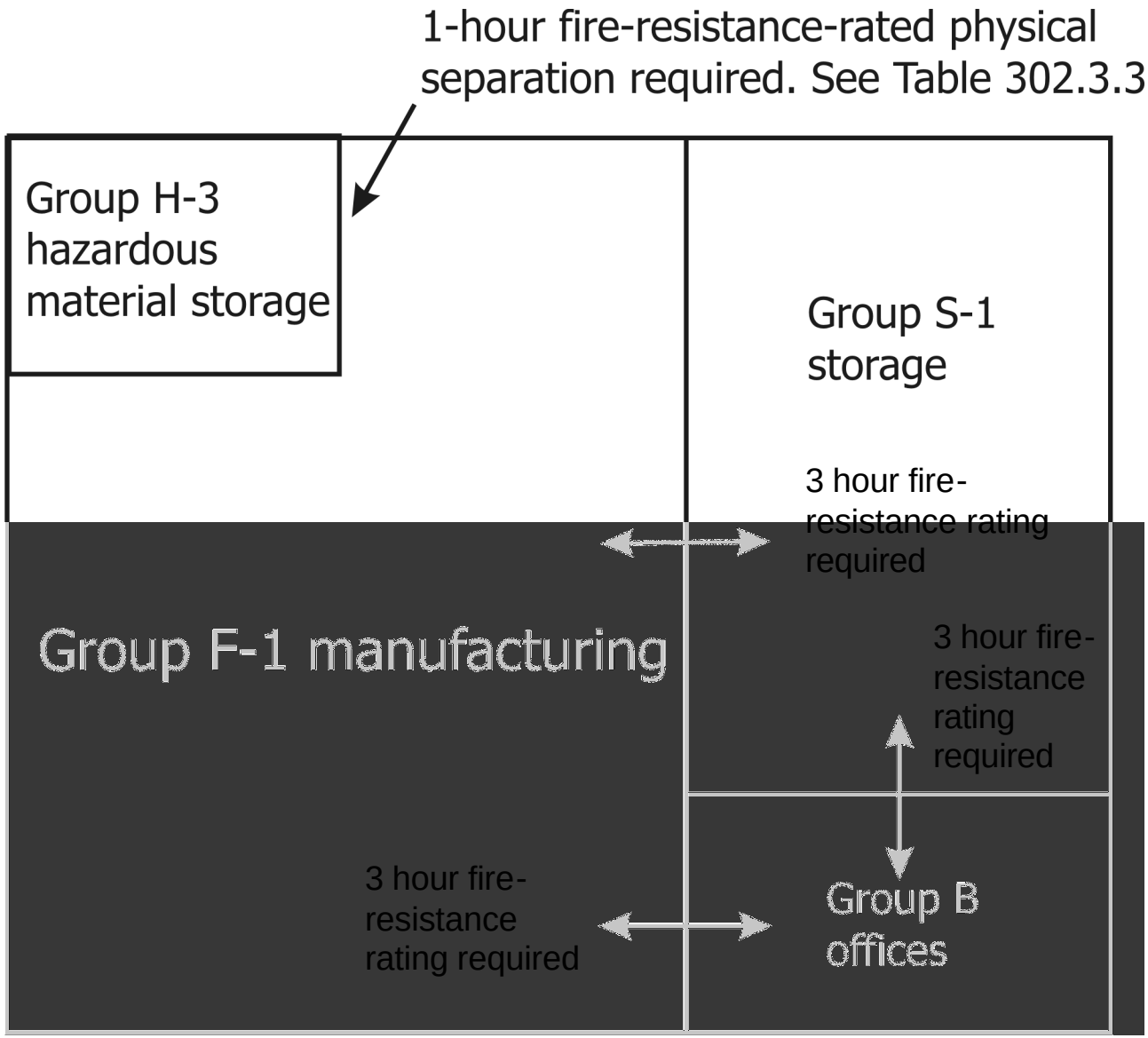
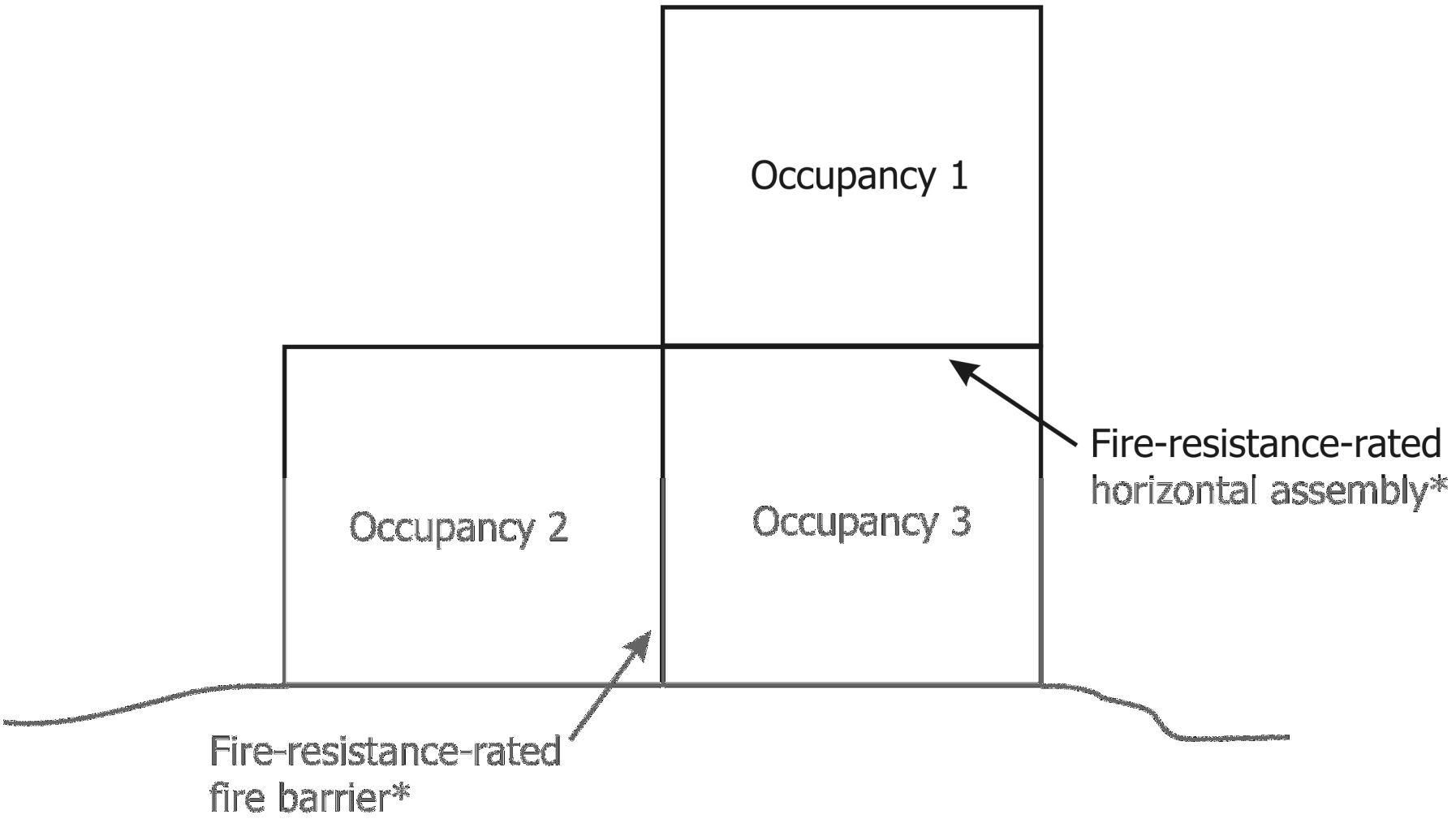
CHAPTER 3:
USE AND OCCUPANCY CLASSIFICATION

302 CLASSIFICATION

- **302.3.2 Separated uses.** *(cont'd)*
  - **Exception:**
    - Permission to reduce the fire- resistance rating by one hour for sprinklered buildings, but not less than 1 hour and not less than that required for floor construction by type of construction.
    - Does not apply to Group H and Group I-2 use areas.


1-hour fire-resistance-rated physical separation required. See Table 302.3.3
Group H-3 hazardous material storage
Group S-1 storage
3 hour fire-resistance rating required
Group F-1 manufacturing
3 hour fire-resistance rating required
3 hour fire-resistance rating required
Group B offices



* Minimum fire-resistance rating based on Section 302.3.3 and Table 302.3.3

Chapter 4: Special Detailed Requirements Based on Use and Occupancy

OVERVIEW

- Adds sections addressing:
  - **Adult Day Care** (433)
  - **Assisted Living Facilities** (434)
  - **Control of Radiation Hazards** (435)
- Occupancy use provisions expanded in all special occupancies.
- Includes relevant definition per occupancy.
- Swimming Pools and Bathing Places brought forth from 2001 *Florida Building Code* and modified (10 changes)

Chapter 4: Special Detailed Requirements Based on Use and Occupancy

424 SWIMMING POOLS AND BATHING PLACES

- **424.1.3.1 Decks and Walkways.**
  - **424.1.3.1.9.** All public pools shall be surrounded by a minimum 48 inch in height fence.
  - The fence shall be continuous.
  - Access through the barrier other than from doored exits of adjacent building(s) shall be through self-closing self-latching lockable gates of 48 inches.
  - Safety Covers that comply with ASTM Standard F1346 do not satisfy this requirement.

Chapter 4: Special Detailed Requirements Based on Use and Occupancy

424 SWIMMING POOLS & BATHING PLACES

- **424.2.17.1.16 Adjacent Waterways.**
  - Permanent natural/permanent man-made features (bulkheads, canals, lakes, navigable waterways, etc.) adjacent to a public or private swimming pool/spa may be permitted as a barrier when approved by the authority having jurisdiction, if:
    - Barrier feature is not subject to natural changes, deviations, or alterations and is capable of providing an equivalent level of protection
    - The barrier feature clearly impedes, prohibits or restricts access to the swimming pool or spa.

Chapter 5:
General Building Heights and Areas

OVERVIEW

- Table 503, Allowable Height and Building Areas new/different
- Section 501.2, Premises Identification, requires a building to be provided with approved numbers or address clearly visible from the street.
- Landscaping around the perimeter of a building may be important in determining allowable heights and areas, since grade plane is used in determining the allowable height of the building.

Chapter 5:
General Building Heights and Areas

503 GENERAL HEIGHT AND AREA LIMITATIONS

- Portions of a building within exterior walls and fire walls are permitted to be considered as separate buildings.
- Table 503, Allowable Height and Building Areas, provides allowable height and building areas in story based on the occupancy group and type of construction.

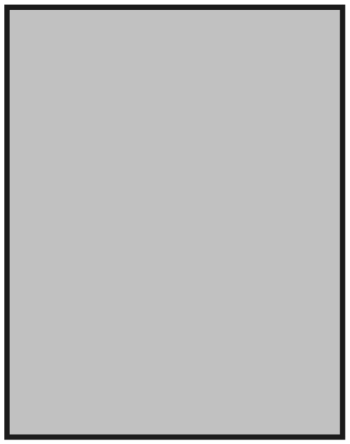
Chapter 5:
General Building Heights and Areas

- Table 503: Allowable Height and Building Areas
  - See Tables in Appendix (in the Participant Guide)

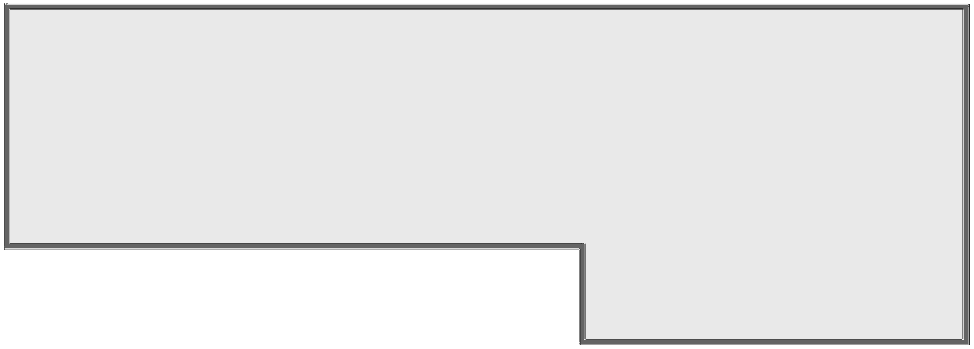
Chapter 5:
General Building Heights and Areas

503 GENERAL HEIGHT AND AREA LIMITATIONS

- **503.1.3 Buildings on same lot.**
  - Requires two or more buildings on the same lot to be treated as separate buildings unless the aggregate area and height of the two buildings together meet the requirements of Table 503, Allowable Height and Building Areas.
- **503.1.4 Type I construction.**
  - Table 503 allows unlimited heights and areas for Type I buildings of most groups



May be considered a single building if the aggregate area is within limits specified in Table 503 as modified by Sections 504, and 506

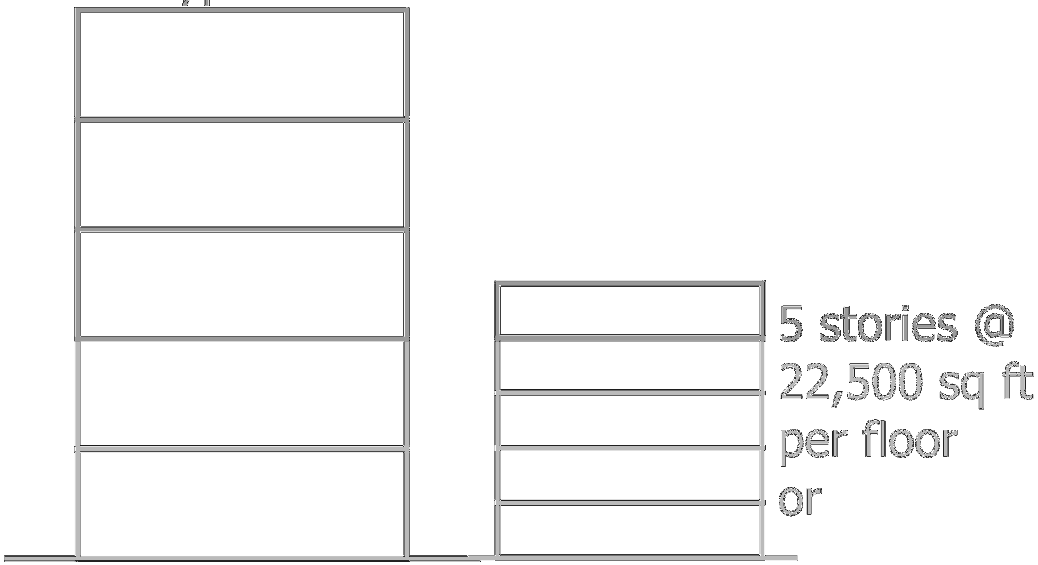


The provisions of the code applicable to the aggregate building shall be applicable to each building.

Group A-2
Type VA

Maximum area per floor: 11,500 sq ft
Maximum area for building: 11,500 sq ft
× 2
23,000 sq ft

Group B
Type IIA



Maximum area per floor: 37,500 sq ft
Maximum area for building: 37,500 sq ft
× 3
112,500 sq ft

5 stories @
22,500 sq ft
per floor
or

3 stories @
12,500 sq ft per floor

2 stories @
37,500 sq ft per floor
or
other combinations
up to 5 stories and
65 feet in height

Chapter 5:
General Building Heights and Areas

504 HEIGHT MODIFICATIONS

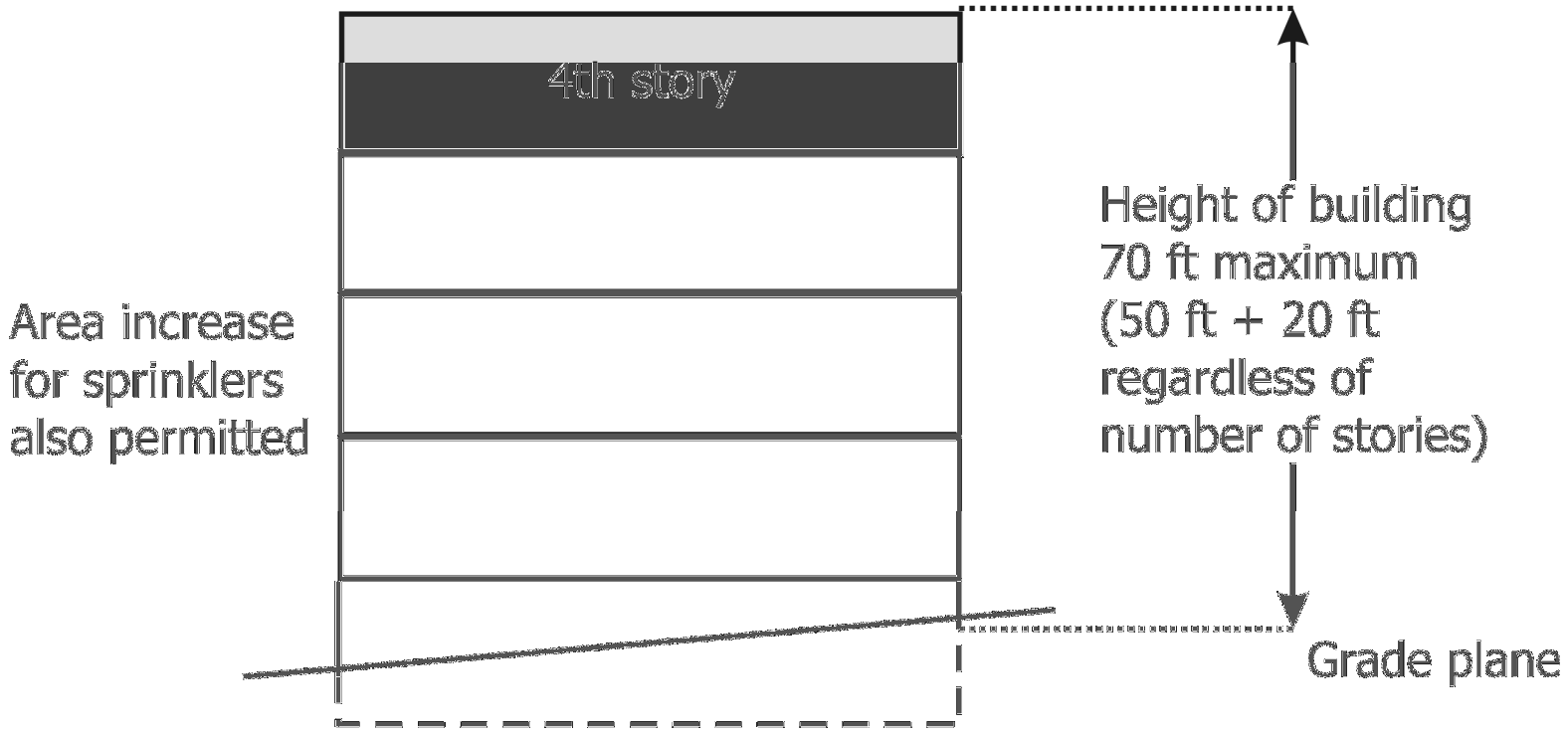
- **504.1 Special unlimited height.**
  - Group B, Group M and Group R occupancies of Type I-B , provided:
    - Fire resistance of all columns must be not less than 3 hours
    - Other structural members including floors must be not less than 2 hours, except that roofs and their supporting beams, girders, trusses and arches shall be not less than 1½ hours.
      - Exceptions for Aircraft hangers

Chapter 5:
General Building Heights and Areas

504 HEIGHT MODIFICATIONS

- **504.2 Automatic sprinkler system increase.**
  - Where a building is equipped throughout with an approved automatic sprinkler system,
  - The value specified in Table 503 for maximum height may be increased by 20 feet and
  - The maximum number of stories may be increased by one story.
  - These increases are permitted in addition to the area increase in accordance with Sections 506.2 and 506.3.
  - Group R limited to 4 stories or 60 feet

Maximum height and number of stories based upon occupancy and type of construction as set forth in Table 503.
Given: a type VA office building is permitted to be 3 stories and 50 feet in height per Table 503.
If sprinkler system installed per Section 504.2, the story limit may be increased by one story, and the height can exceed the limit in Table 503 by 20 feet.



Increase does not apply when sprinkler installed under following conditions:
1. Group I-2 of Type IIB, III, IV or V construction
2. Group H-1, H-2, H-3 or H-5.

Chapter 5:
General Building Heights and Areas

504 HEIGHT MODIFICATIONS

- **504.3 Roof structures.**
  - Towers, spires, steeples and other roof structures.
  - Such structures shall not be used for habitation or storage.
  - The structures shall be unlimited in height if of noncombustible materials and shall not extend more than 20 feet above the allowable height if of combustible materials (see Chapter 15 for additional requirements).

Chapter 5:
General Building Heights and Areas

506 AREA MODIFICATIONS

- **506.1 General.**
  - The areas limited by Table 503 shall be permitted to be increased due to:
    - Frontage (I_f) and
    - Automatic sprinkler system protection (I_s)

  in accordance with Equation 5-1.

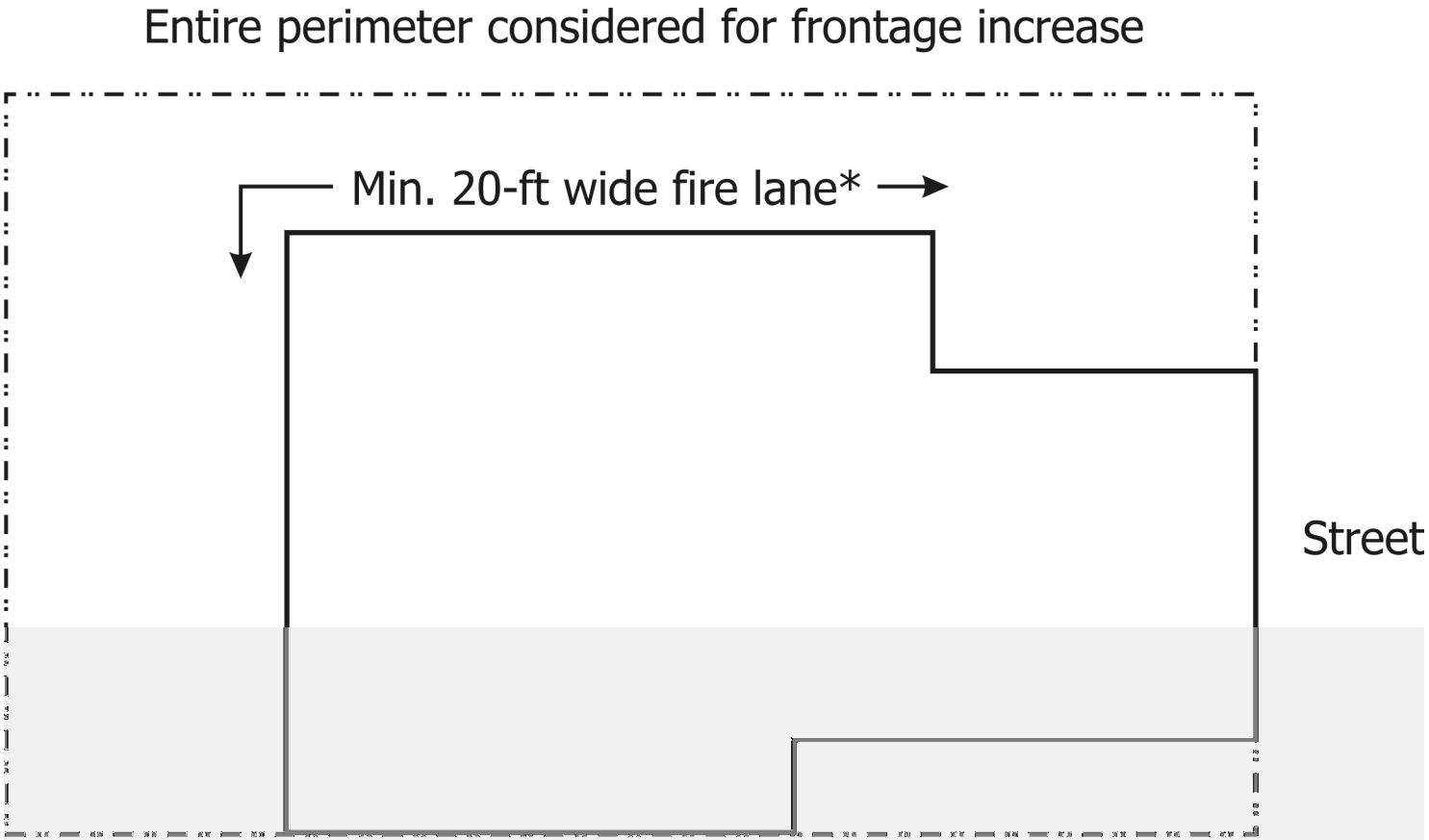
$$A_a = A_t + \left[\frac{A_t I_f}{100}\right] + \left[\frac{A_t I_s}{100}\right]$$

Chapter 5:
General Building Heights and Areas

506 AREA MODIFICATIONS

- **506.2 Frontage increase.**
  - To receive an area increase for frontage:
    - Building must adjoin or have access to a public way.
    - Where a building has more than 25 percent of its perimeter on a public way or open space having a minimum width of 20 feet, the frontage increase must as per Equation 5-2.

$$I_f = 100\left[\frac{F}{P} - 0.25\right]\frac{W}{30}$$



Open space to be on same lot or dedicated for public use, and accessed from a street or approved fire lane

*Fire lane need only be provided to within 150 feet of exterior wall per the Florida Fire Prevention Code.

Chapter 5:
General Building Heights and Areas

506 AREA MODIFICATIONS

- **506.3 Automatic sprinkler system increase.**
  - Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the area limitation in Table 503 is permitted to be increased by
    - An additional 200 percent (I_s = 200 percent) for multistory buildings and
    - An additional 300 percent (I_s = 300 percent) for single-story buildings.
  - Exceptions are: H-1, H-2 and H-3.

Chapter 5:
General Building Heights and Areas

- Example:
  - Given: Group B occupancy single-story
    Type VB construction
    No open yards available
  - Find: Total allowable area
  - Basic allowable area = 9,000 sq ft (Table 503)
    Sprinkler increase (I_s) = 27,000 sq ft (300%)
    Total allowable area = 36,000 sq ft

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Chapter 5:
General Building Heights and Areas

- Example: *(cont'd)*
  - Given: Same situation, however, 2 stories in height
  - Find: Total allowable area
  - Basic allowable area = 9,000 sq ft (Table 503)
    Sprinkler increase (I_s) = 18,000 sq ft (200%)
    Total allowable area per floor = 27,000 sq ft

Chapter 5:
General Building Heights and Areas

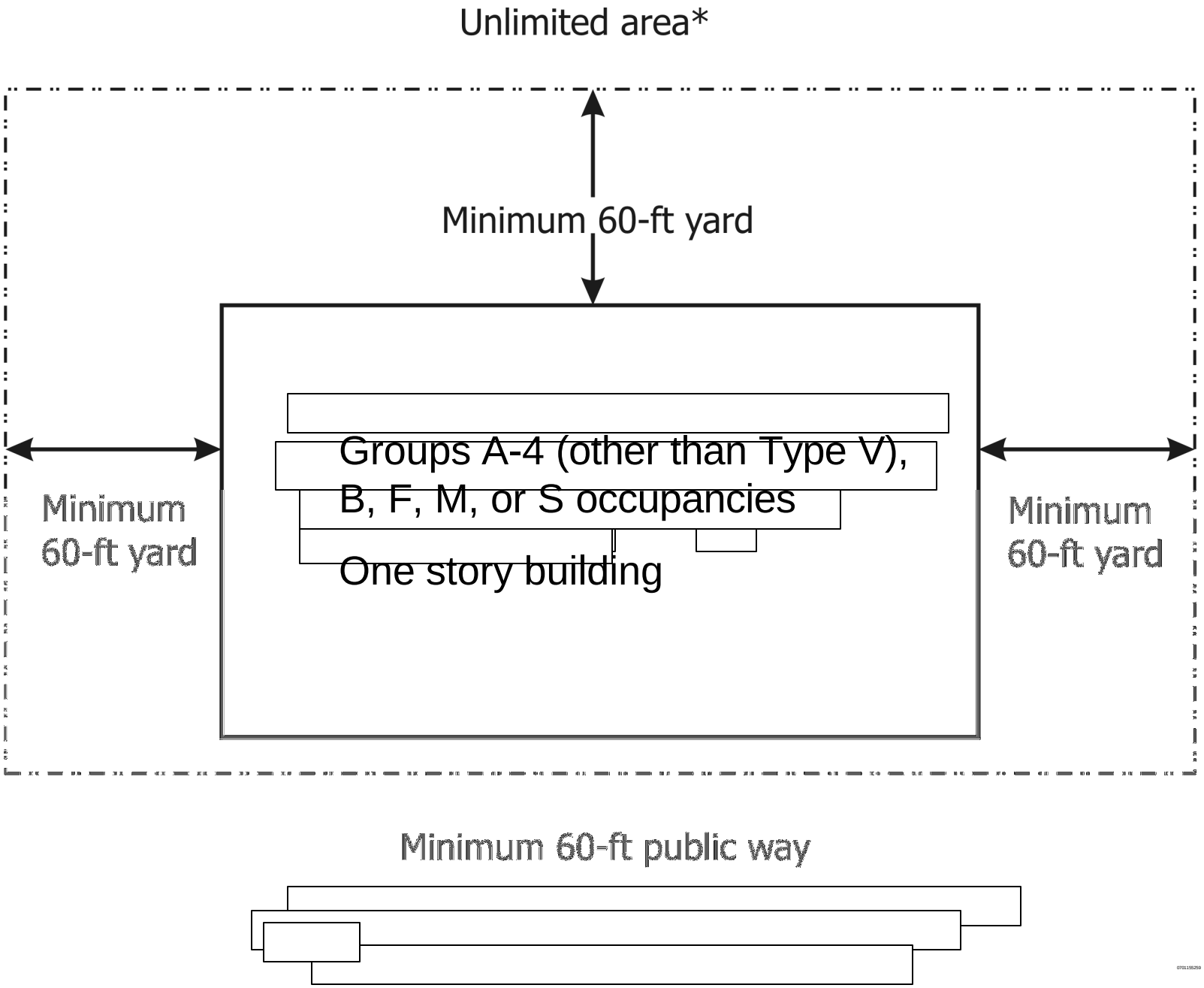
507 UNLIMITED AREA BUILDINGS

- **507.2 Sprinklered, one story.**
  - The area of a one-story, Group B, F,M or S building or a one-story Group A-4 building of other than Type V construction shall not be limited when the building is provided with:
    - An automatic sprinkler system throughout, and
    - Surrounded and adjoined by public ways or yards not less than 60 feet in width.
      - **Exceptions**

Chapter 5:
General Building Heights and Areas

507 UNLIMITED AREA BUILDINGS

- **507.8 Group E buildings.**
  - The area of a one-story Group E building of Type II, IIIA or IV construction shall not be limited when the following criteria are met:
    - 1. Each classroom must have two means of egress, or the building is provided with smoke barriers having a minimum 1-hour fire-resistance rating dividing the building into areas not to exceed 30,000 square feet in floor area.
    - 2. The building is equipped throughout with an automatic sprinkler system.
    - 3. The building is surrounded and adjoined by public ways or yards not less than 60 feet in width.


Unlimited area*
Minimum 60-ft yard
Minimum
60-ft yard
Groups A-4 (other than Type V),
B, F, M, or S occupancies
One story building
Minimum
60-ft yard
Minimum 60-ft public way

Chapter 6: Type of Construction

602 CONSTRUCTION CLASSIFICATION

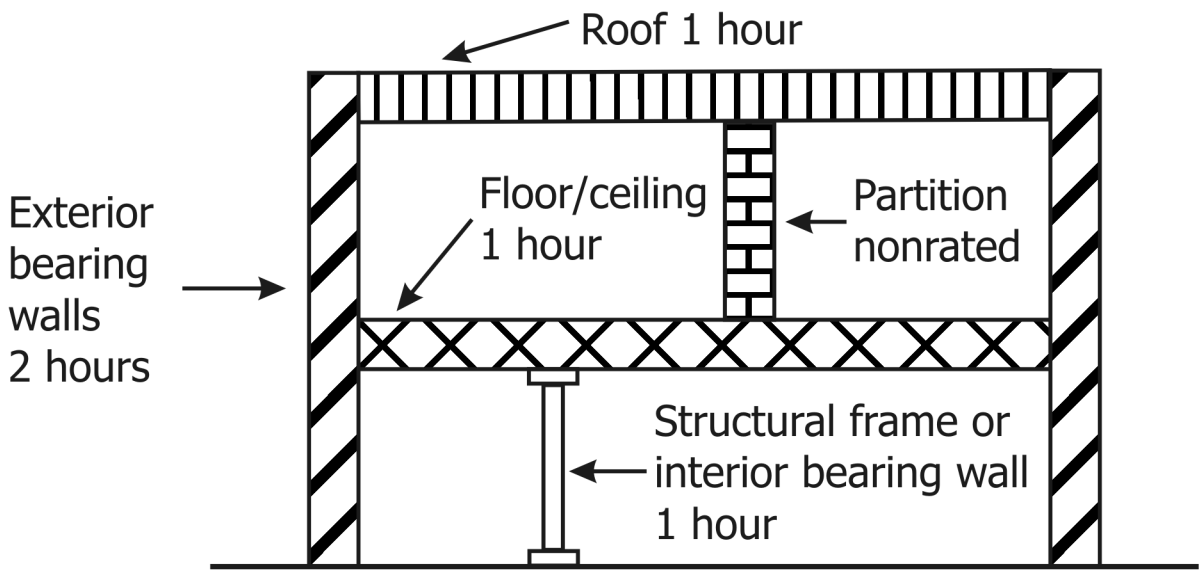
- **602.1 General.**
  - Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of **the five construction types** defined in Sections 602.2 through 602.5.

Chapter 6: Type of Construction

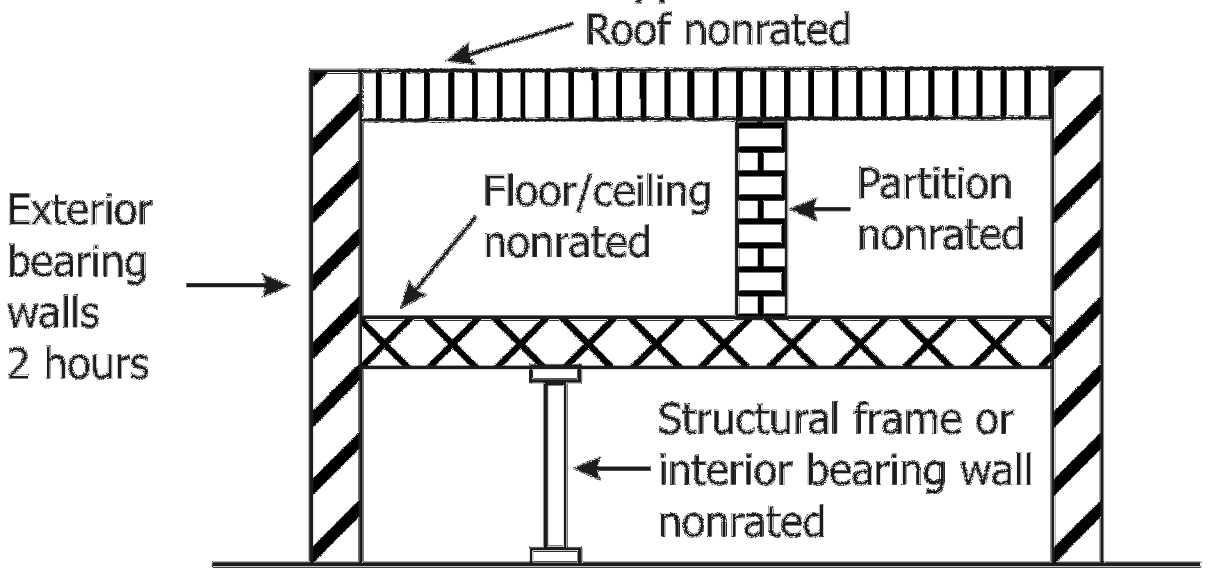
602 CONSTRUCTION CLASSIFICATION

- **602.2 Types I and II.**
  - Types of construction in which the building elements listed in Table 601 are of noncombustible materials.
- **602.3 Type III.**
  - The exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code.
  - Fire-retardant-treated wood framing are permitted within exterior wall assemblies of a 2-hour rating or less.

Type III-A



Type III-B



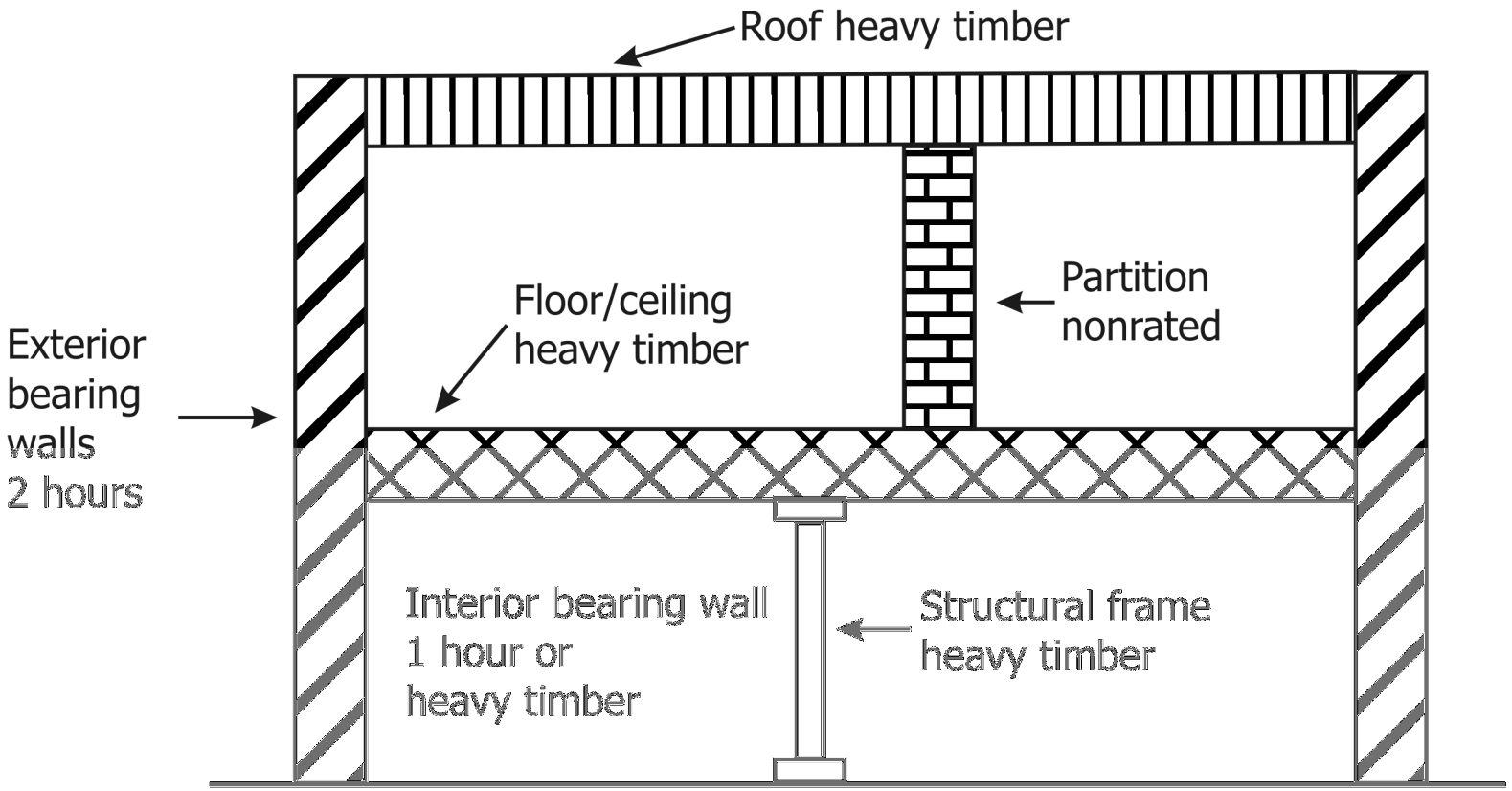
* See Notes to Tables 601 and 602

Chapter 6: Type of Construction

602 CONSTRUCTION CLASSIFICATION

- **602.4 Type IV.**
  - Type IV construction (Heavy Timber, HT).
  - The exterior walls are of noncombustible materials.
  - The interior building elements are of solid or laminated wood without concealed spaces.
  - Fire-retardant-treated wood framing are permitted within exterior wall assemblies with a 2-hour rating or less.

Type IV Heavy Timber

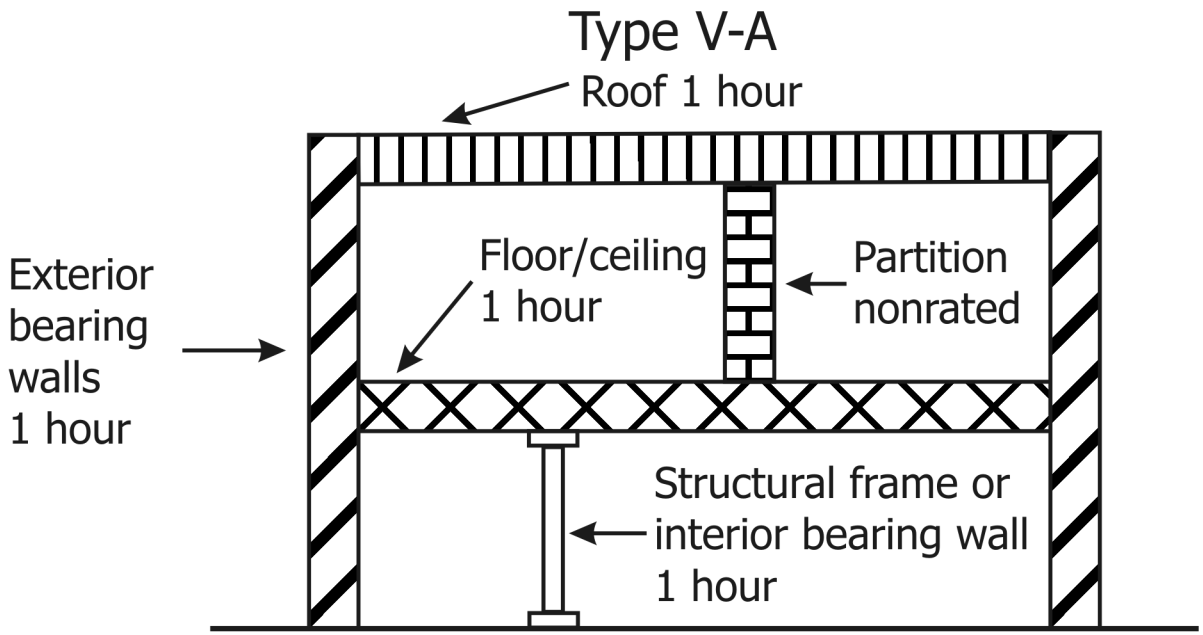


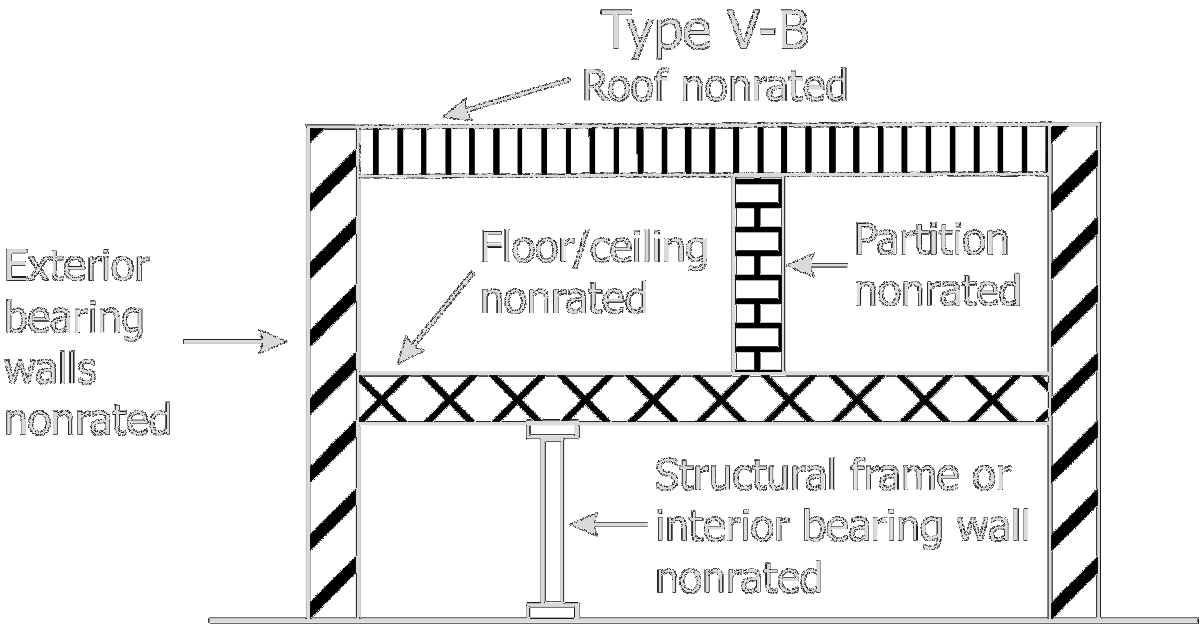
* See Notes to Tables 601 and 602

Chapter 6: Type of Construction

602 CONSTRUCTION CLASSIFICATION

- **602.5 Type V.**
  - Type V construction is that type of construction in which the structural elements, exterior walls and interior walls are of any materials permitted by this code.





* See Notes to Tables 601 and 602

SUMMARY TABLE

Noncombustible	Exterior and interior (bearing or nonbearing) walls, floors, roofs and structural elements to be of noncombustible materials	I	A	B
		II	A	B
Combustible	Exterior walls to be of noncombustible materials	III	A	B
		IV	A	B
		V	A	B

Characteristics of combustion types

Chapter 6: Type of Construction

603.1 Allowable Materials

- Combustible materials permitted in buildings of Type I and Type II construction in the following applications:
  - Fire-retardant-treated wood in:
    - nonbearing partitions with fire-resistance rating $\leq$ 2 hours
    - nonbearing exterior walls requiring no fire rating
    - roof construction as permitted in T601, note C, Item 3
  - Thermal and acoustical insulation, other than foam plastics, with limited flame spread
  - Foam plastics per Chapter 26

...continued on next slide

Chapter 6: Type of Construction

- Combustion materials permitted in buildings of Type I and Type II construction in the following applications: *(cont'd)*
  - A, B, or C roof coverings
  - Interior floor finish, trim, millwork, doors, frames, etc.
  - Where not installed over 15 feet (4572 mm) above grade, show windows, nailing or furring strips, wooden bulkheads below show windows, their frames, aprons and show cases.
  - Finished flooring applied directly to the floor slab or to wood sleepers that are firestopped in accordance with Section 717.2.7
  - Partitions dividing portions of stores, offices or similar places occupied by one tenant only and which do not establish a corridor serving an occupant load of 30 or more shall be permitted to be constructed of fire-retardant treated wood, 1 hour fire resistance-rated construction or of wood panels or similar light construction up to 6 feet (1829 mm) in height.

Chapter 6: Type of Construction

- Combustion materials permitted in buildings of Type I and Type II construction in the following applications: *(cont'd)*
  - Platforms per Section 410
  - Combustible exterior wall coverings, balconies, bay or oriel windows, or similar appendages in accordance with Chapter 14.
  - Blocking for handrails, cabinets, fixtures, etc.
  - Light-transmitting plastics per Chapter 26
  - Mastics and caulking materials applied to provide flexible seals between components of exterior wall construction.
  - Exterior plastic veneer installed in accordance with Section 2605.2
  - Nailing or furring strips per Section 803.3
  - Heavy timber for specific components

Chapter 6: Type of Construction

- Combustion materials permitted in buildings of Type I and Type II construction in the following applications: *(cont'd)*
  - Aggregates, component material and admixtures as permitted by Section 703.2.2
  - Sprayed cementitious and mineral fiber fire-resistance- rated materials installed to comply with Section 1704.11
  - Materials used to protect penetrations in fire-resistance-rated assemblies in accordance with Section 712
  - Materials used to protect joints n fire-resistance-rated assemblies in accordance with Section 713
  - Materials allowed in the concealed spaces of buildings of Type I and II construction in accordance with Section 717.5
  - Materials exposed within plenums complying with Section 602 of the Florida Building Code, Mechanical
  - Additional applications as specified

2004 FLORIDA EXISTING BUILDINGS CODE, APPENDIX D

Type of Construction	
2001 Florida Building Code	**2004 Florida Building Code**
Type I	Type I-A
Type II	Type I-B
Type III	Type IV
Type IV 1-hour protected	Type II-A
Type IV Unprotected	Type II-B
Type V 1-hour protected	Type III-A
Type V Unprotected	Type III-B
Type VI 1-hour protected	Type V-A
Type VI Unprotected	Type V-B

Source: *2003 Life Safety Code Handbook,* Commentary Table 8.1, Cross-Reference of Building Construction Types.

Chapter 6: Type of Construction

TABLE 601: FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS

- Provide fire-resistive requirements for building elements by construction types.
- Elements include structural frame, bearing walls, non-bearing walls and partitions, floor construction, and roof construction.
- The fire-resistive rating are provided in hours.

TABLE 601:
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hrs)

BUILDING ELEMENTS	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A	B	A	B	HT	A	B
Structural frame [a] Including columns, girders, trusses	3 [b,g]	2 [b]	1	0	1	0	HT	1	0
Bearing walls Exterior [f] Interior	4 4 [b]	3 3 [b]	1 1	0 0	2 1	2 1	2 2 [b]/ HT	1 1	0 0
Nonbearing walls and partitions Exterior	See Table 602								
Nonbearing walls and partitions Interior [e]	0	0	0	0	0	0	see section 602.4.6	**0**	**0**
Floor construction Including supporting beams and joists	3 [g]	2	1 [d]	0 [d,h]	1 [d]	0 [d,h]	HT	1	0
Roof construction Including supporting beams and joists	1½ [c, g]	1 [c]	1 [c]	0	1 [c]	0	HT	1 [c]	0

Chapter 6: Type of Construction

TABLE 602: FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

- Addresses exterior wall fire-resistance based upon setbacks to property lines ranging from less than five feet to greater than thirty feet.
- The fire-resistive requirements of exterior walls are a function of both construction type and occupancy classification. The rating range from four hours to zero hours.

...continued on next slide

Chapter 6: Type of Construction

TABLE 602: FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE *(cont'd)*

- Table 602 regulates exterior walls only
- Table 602 used in conjunction with 601 for fire resistance of exterior bearing walls
- Only Table 602 used for nonbearing exterior walls
- Highest required rating for exterior wall is 3 hours
- Final threshold at $\geq$ 30 feet
- Additional provisions for exterior walls and openings in Section 704

CHAPTER 7:

- Provides prescriptive fire-resistance and calculated fire-resistance.

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

703 FIRE-RESISTANCE RATING AND FIRE TESTS

- Rating of assemblies and structural elements are required to meet ASTM E 119, a test that evaluates the ability of an assembly to meet structural integrity and fire containment criteria.

CHAPTER 7:
FIRE-RESISTANCE-RATED CONSTRUCTION

704 EXTERIOR WALLS

- Address the exterior enclosures of buildings to prevent the spread of fire between buildings and between stories in a buildings.
- **Table 704.8: Maximum Area of Exterior Wall Openings** *(see notes)*

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

705 FIRE WALLS

- **705.1 General.**
  - For the purposes of determining height and area in accordance with Table 503, fire walls dividing buildings into separate buildings shall provide a 4-hour fire resistance rating. The extent and location of such fire walls shall provide a complete separation. Where a fire wall also separates groups that are required to be separated by a fire barrier wall, the most restrictive requirements of each separation shall apply.
  - **705.4.1 Townhouse fire separation**

CHAPTER 7:
FIRE-RESISTANCE-RATED CONSTRUCTION

706 FIRE BARRIERS

- Assemblies with required fire resistance rating used to separate fire areas, exits, and mixed use areas.
- The locations of fire barriers are generally provided in other sections of the Code, such as Chapter 10 for exits and Chapter 3.

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

709 SMOKE BARRIERS

- Divide buildings into smoke compartments and are required to be of one-hour construction, except as permitted by the exception for steel barriers in Group I-3 occupancies.

CHAPTER 7: FIRE-RESISTANCE-RATED CONSTRUCTION

720 PRESCRIPTIVE RESISTANCE

- **720.1 General.**
  - The provisions of this section contain prescriptive details of fire-resistance-rated building elements. The materials of construction listed in Tables 720.1(1), 720.1(2), and 720.1(3) shall be assumed to have the fire-resistance ratings prescribed therein.

CHAPTER 8: INTERIOR FINISHES

801 GENERAL

- 801.1 Scope.
  - Governs the use of materials used as interior finishes, trim and decorative materials.
  - Intent is to control the rapidity of fire development and spread in a building due to finishes applied to walls, ceilings, and floors.
  - Classifies interior finishes in Classes A, B, C.

TABLE 803.5:
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY [k]

GROUP	SPRINKLERED [l]			UNSPRINKLERED		
	Vertical exits and exit passageways [a, b]	Exit access corridors and other exitways	Rooms and enclosed spaces [c]	Vertical exits and exit passageways [a, b]	Exit access corridors and other exitways	Rooms and enclosed spaces [c]
A-1 and A-2	B	B	C	A	A [d]	B [e]
A-3 [f], A-4, A-5	B	B	C	A	A [d]	C
B, D, E, M, R-1, R-4	B	C	C	A	B	C
F	C	C	C	B	C	C
H	B	B	C [g]	A	A	B
I-1	B	C	C	A	B	B
I-2	B	B	B [h, i]	A	A	B
I-3	A	A [j]	C	A	A	B
R-2	C	C	C	B	B	C
R-3	C	C	C	C	C	C
S	C	C	C	B	B	C
U	No restrictions			No restrictions		

Chapter 9:
Fire Protection Systems

903 AUTOMATIC SPRINKLER SYSTEMS

- 903.2.1.2 Group A-2.
  - An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:
    1. The fire area exceeds 5,000 sq ft.
    2. The fire area has an occupant load of 300 or more.
    3. The fire area is located on a floor other than the level of exit discharge.
    4. Nightclubs or similar usage when occupant load is 100 or more.

Chapter 9:
Fire Protection Systems

903 AUTOMATIC SPRINKLER SYSTEMS

- **903.6 Buildings three stories or more in height.**
  - **903.6.1** Any building which is of three stories or more in height shall be equipped with an approved automatic sprinkler system installed in accordance with §903.1.

Chapter 9:
Fire Protection Systems

905 STAND PIPE SYSTEMS

- **905.3.1 Building height.**
  - Class III standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet above the lowest level of fire department vehicle access, or where the floor level of the lowest story is located more than 30 feet below the highest level of fire department vehicle access. High-rise buildings shall be protected throughout by a Class I standpipe system.
  - Added Exception number 5.

CHAPTER 10: MEANS OF EGRESS

1001 ADMINISTRATION

- **[F] 1001.3 Maintenance.** Means of egress shall be maintained in accordance with the *Florida Fire Prevention Code*.
- **1001.4 Alterations.** A building shall not hereafter be altered to reduce the capacity of the means of egress to less than required by this chapter nor shall any change of occupancy be made in any building unless such building conforms with the requirements of this chapter.
  - **Exception:** Existing stairs shall be permitted to remain in use provided they comply with the requirements of the building code in effect at the time of original construction.
- **1001.5** Where approved by the Building Official, existing stairs shall be permitted to be rebuilt in accordance with the dimensional criteria of the building code in effect at the time of original construction provided: (see notes)

CHAPTER 10: MEANS OF EGRESS

1003 GENERAL MEANS OF EGRESS

- **1003.2 Ceiling height.**
  - The means of egress shall have a ceiling height of not less than 7 feet 6 inches.

The following sections were revised for consistency with FFPC:

- **1003.3.3 Horizontal projections.**
- **1003.4 Floor surface.**
  - Walking surfaces shall be slip resistant

CHAPTER 10: MEANS OF EGRESS

1003 GENERAL MEANS OF EGRESS

- **1003.5 Elevation change.**
  - Minimum tread depth of such stair shall be 13 inches when elevation change does not exceed 21 inches.
  - **1003.5.3 Accessibility.**
    - See §11-4.3.8.
- **Table 1004.3.2.1: Corridor Fire-Resistance Rating**

1006 MEANS OF EGRESS ILLUMINATION AND SIGNS

- **New section**

CHAPTER 10: MEANS OF EGRESS

1008 DOORS, GATES AND TURNSTILES

- **1008.1.3.6.** The temporary installation or closure of storm shutters, panels in Group R
- **1008.1.8.2 Hardware height.**
  - Releasing mechanism for any latch shall be located at least 34 inches and not more than 48 inches above the finished floor.

CHAPTER 10: MEANS OF EGRESS

1009 STAIRWAYS AND HANDRAILS

- **1009.5.3 Stair identification.**
- **1009.9 Spiral stairways.**

1010 RAMPS

- **Table 1015.1: Exit Access Travel Distance** *(see upcoming slide)*
  - Other changes including special requirements for certain occupancies.

TABLE 1005.1:
EGRESS WIDTH PER OCCUPANT SERVED

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM [a]	
	Stairways (inches/occupant)	Other egress components (inches/occupant)	Stairways (inches/occupant)	Other egress components (inches/occupant)
Occupancies other than those listed below	0.3	0.2	0.3	0.2
Hazardous: H-1, H-2, H-3 and H-4	0.7	0.4	0.7	0.4
Health care	0.6	0.5	0.3	0.2
Institutional: I-2	NA	NA	0.4	0.2

For SI: 1 inch = 25.4 mm. NA = Not applicable.

[a] Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

TABLE 1006: EMERGENCY LIGHTING REQUIREMENTS

OCCUPANCY	CONDITIONS	EXCEPTIONS
Assembly		Private party tents < 1200 sq ft
Educational	For interior stairs and corridors, normally occupied spaces, flexible and open-plan area, interior or windowless portions, shops, and labs	Exempted from administrative areas, general classrooms, mechanical rooms, and storage rooms
Group I-1 and I-2	If using life-support systems, supply the required power from life safety branch of electricals as required by NFPA 99	None
Outpatient clinics, ambulatory	If using life-support systems for other than emergency purposes, supply the required power essentials electrical system as required by NFPA 99	None
Group I-3	None	None
Hotels and dormitories	> 25 rooms	All rooms direct to grade
Apartment buildings	> 12 units or > 3 stories	All apartments direct to grade
R-4, Large facilities	> 25 rooms	All rooms direct to grade
Mercantile	> 1 story >3000 sq ft gross sales area and malls	None
Business	> 2 stories above LED, or = 50 people above or below LED, or = 300 people total	None
Industrial	None	When approved by the building official, special purpose without routine occupancy, or daylight operations with windows
Storage	None	When approved by the building official, not normally occupied, or daylight operations with windows
Daycare centers	For interior stairs and corridors, normally occupied spaces, flexible and open-plan area, interior or windowless portions, shops, and labs	Exempted from administrative areas, general classrooms, mechanical rooms, and storage rooms

TABLE 1014.1:
SPACES WITH ONE MEANS OF EGRESS

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A,B, D, E, F, M, U,R-2, R-3	50
H-1, H-2, H-3	3
H-4, H-5, I-1, I-3, R-1, R-4	10
S	30

TABLE 1015.1:
EXIT ACCESS TRAVEL DISTANCE [a]

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (ft)	WITH SPRINKLER SYSTEM (ft)
A, E	150	200 [b]
B	200	300 [c]
I-1	Not permitted	250 [c]
I-2	Not permitted	200 [c]
I-3	150	200 [c]
D	150	200 [c]
M	150	250 [c]
R	175	325 [c]
S-2	Unlimited	Unlimited
S-1, F-1, F-2	200	250 [c]
F-3	300	400 [c]
H-1	Not permitted	75 [c]
H-2, H-3, H-4, H-5	Not permitted	100 [c]

TABLE 1016.1:
CORRIDOR FIRE-RESISTANCE RATING

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours)	
		Without sprinkler system	With sprinkler system [c]
H-1, H-2, H-3	All	1	1
A, H-4, H-5	Greater than 30	1	1
B, D, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	1	1
I-2 [a]	All	Not permitted	0
I-1, I-3	All	Not permitted	1 [b]

[a] For requirements for occupancies in Group I-2, see Section 407.3.

[b] Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1

[c] In buildings protected throughout by an approved, supervised, automatic sprinkler system in accordance with Section 903, corridor walls shall not be required to be rated, provided that such walls form smoke partitions in accordance with the Florida Fire Prevention Code.

TABLE 1018.1:
MINIMUM NUMBER OF EXITS FOR OCCUPANT LOAD

OCCUPANT LOAD	MINIMUM NUMBER OF EXITS
1–500	2
501–1,000	3
More than 1,000	4

TABLE 1018.2:
BUILDINGS WITH ONE EXIT

OCCUPANCY	MAXIMUM HEIGHT OF BUILDING ABOVE GRADE PLANE	MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE
A, B [d], D, E, F, M, U	1 story	50 occupants and 75 feet travel distance
H-2, H-3	1 story	3 occupants and 25 feet travel distance
H-4, H-5, I, R	1 story	10 occupants and 75 feet travel distance
S [a]	1 story	30 occupants and 100 feet travel distance
B [b], F, M, S [a]	2 stories	30 occupants and 75 feet travel distance
R-2	2 stories [c]	4 dwelling units and 50 feet travel distance

TABLE 1024.6.2:
WIDTH OF AISLES FOR SMOKE-PROTECTED ASSEMBLY

TOTAL NUMBER OF SEATS IN THE SMOKE-PROTECTED ASSEMBLY OCCUPANCY	INCHES OF CLEAR WIDTH PER SEAT SERVED			
	Stairs & aisle steps with handrails within 30 inches	Stairs & aisle steps without handrails within 30 inches	Passageways, doorways and ramps not steeper than 1-in-10 slope	Ramps steeper than 1-in-10 slope
≥ 5,000	0.200	0.250	0.150	0.165
10,000	0.130	0.163	0.100	0.110
15,000	0.096	0.120	0.070	0.077
20,000	0.076	0.095	0.056	0.062
≤ 25,000	0.060	0.075	0.044	0.048

For SI: 1 inch = 25.4 mm

CHAPTER 12: INTERIOR ENVIRONMENT
CHAPTER 13: ENERGY EFFICIENCY

CHAPTER 12 INTERIOR ENVIRONMENT

- Addresses ventilation, attic spaces, temperature control and lighting

CHAPTER 13 ENERGY EFFICIENCY

- Changes covered in the *Mechanical/Energy Core Update*

CHAPTER 14: EXTERIOR WALLS

1401 GENERAL

- **1401.1 Scope.**
  - Minimum requirements for exterior walls, exterior wall coverings, exterior wall openings, exterior windows and doors, architectural trim, balconies and bay windows
  - Vapor Retarder (1403.3)
  - Includes minimum fire separation for combustible veneers
  - Metal composite materials (MCM) section

Chapter 15:
Roof Assemblies and Rooftop Structures

Overview

- Prescriptive requirements expanded to 110 mph for section 1507.2.7 and 1507.2.8
- **1503.4.2 Scupper.**
  - Where required

CHAPTER 16: STRUCTURAL DESIGN

- Wind Loading Requirements updated
- ASCE 7-02 minimum
- 1606.2 Simplified provisions retained
- Definitions consistent with 2001 *Florida Building Code*

CHAPTER 17:
STRUCTURAL TESTS & SPECIAL INSPECTIONS

- Expands testing protocol for exterior windows and doors

CHAPTER 18: SOILS & FOUNDATIONS
CHAPTER 19: CONCRETE

CHAPTER 18 SOILS & FOUNDATIONS

- Prescriptive
- 1806 Retaining Walls
- 1816 Termite protection

CHAPTER 19 CONCRETE

- 1911.2 Joints.
- 1917 Lightweight Insulation Concrete Fill
- 1918 Special Wind Provisions for Concrete

CHAPTER 20: LIGHT METAL ALLOYS

2002 STRUCTURAL ALUMINUM

- **2002.2 Structural aluminum construction.**
  - The design, fabrication and assembly of structural aluminum for buildings or structures shall conform to AAASM 35 and Specifications for Aluminum Structures, Aluminum Design Manual, Part 1-A and 1-B, of the Aluminum Association. The use of aluminum alloys not listed in the manual shall be permitted provided their standard of performance is not less than those required in the manual and the performance is substantiated to the satisfaction of the building official.
- **2002.3 Screen enclosures.**

CHAPTER 21: MASONRY
CHAPTER 22: STEEL

CHAPTER 21 MASONRY

- Empirical design up to 100 mph
- Adobe construction

CHAPTER 22 STEEL

- AISI-NASPEC

CHAPTER 23: WOOD
CHAPTER 24: GLASS & GLAZING

CHAPTER 23 WOOD

- Prescriptive limited to 100 mph—see table footnotes

CHAPTER 24 GLASS AND GLAZING

- ASTM E1300
- Wired/patterned and sandblasted glass

CHAPTER 25 GYPSUM BOARD & PLASTER

- Provisions for stucco and interior and exterior plaster
- Gypsum board in showers and water closets

CHAPTER 26 PLASTICS

- Similar as 2001 Florida Building Code

CHAPTER 27 ELECTRICAL

- NFPA 70 except Article 80

CHAPTER 30: ELEVATORS AND CONVEYING SYSTEMS

3001 GENERAL

- **3001.1 Scope.**
  - This chapter governs the design, construction, installation, alteration and repair of elevators and conveying systems and their components.
- **Note:**
  - Other administrative and programmatic provisions may apply. See the Department of Business and Professional Regulation [DBPR] Chapter 399, Florida Statutes, and 61C-5, Florida Administrative Code. The regulation and enforcement of the following sections of the adopted codes, and their addenda, are preempted to the Bureau of Elevator Safety of the Department of Business and Professional regulation: ASME A 17.1, Part 8, ASME A17.3, Sections 1.2, 1.5, ASME A 18.1, Part 10.

CHAPTER 31: SPECIAL CONSTRUCTION

- **Awning**
  - Any rigid or movable (retractable) roof-like structure, cantilevered, or otherwise entirely supported from a building. An awning is comprised of a lightweight rigid or removable skeleton structure over which an approved cover is attached.
- **Canopy**
  - Any fixed roof-like structure, not movable like an awning, and which is cantilevered in whole or in part self-supporting, but having no side walls or curtains other than valances not more than 18 inches (457 mm) deep. Lean-to canopies, Fixed umbrellas and similar structures are included in this classification. Structures having side walls or valances more than 18 inch deep shall be classified as a tent as set forth herein.

CHAPTER 31: SPECIAL CONSTRUCTION

3105 AWNINGS AND CANOPIES

- **3105.1 Fabric Awnings and Fabric covered Frames.**
  - Fabric must be flame resistance as per NFPA 701 except for R3.
  - Design of frame as per Ch. 16.
    - Wind design load for quick removal/breakaway fabric at wind 75 mph (90 mph and I: .77).
    - Wind design load for permanent fabric—Ch. 16/ I: 0.77.

CHAPTER 31: SPECIAL CONSTRUCTION

- **3105.5 Rigid Awnings and Canopy Shutters**
  - Wind design load—Chapter 16, except for those intended to be removed during high wind (90 mph + 10 psf roof live load).

REMAINING CHAPTERS

CHAPTER 32: ENCROACHMENT INTO THE PUBLIC RIGHT OF WAY

CHAPTER 33: SAFEGUARDS DURING CONSTRUCTION

CHAPTER 34: EXISTING STRUCTURES

CHAPTER 35: REFERENCED STANDARDS

CHAPTER 36: FLORIDA FIRE PREVENTION CODE

2004 Florida Building Code, Building
Building/Structural Summary

Please complete course evaluations