

Building Code Terms for Reference

- **Use groups = Classify a fire hazard level to buildings and structures by amount of people & contents.**
 - **Business = Group B** (offices, banks, dry cleaners, vehicle showrooms, etc.)
 - **Mercantile = Group M** (department store, retail, markets, drug stores, etc...)
 - **Institutional = Group I-2** (child care facility)
 - **Assembly = Group A-2** (banquet halls, night clubs, restaurants)
 - **Residential = Group R-1** (hotels, motels)
 - **Residential = Group R-2** (apartments, condo's)
 - **Residential = Group R-3** (single family & townhomes)

- **“Construction Type” = The ability to resist fire in a building through the materials & hourly fire ratings .**
 - **Includes: structural frame components of walls, floors and roof construction. Table 602.**
 - **Type I** All construction is **non-combustible** with hourly ratings from 1 - 3 hours. **(Most restrictive)**
 - **Type II** All construction is **non-combustible** with hourly ratings of 1 hour. ^
 - **Type III** Non-combustible exterior wall w/2-hour fire rating & interior construction can be any material permitted by the code. ^
 - **Type IV** Heavy timber construction. (*minimum 8" size of structural wood*) ^
 - **Type V** **Wood framing.** (single family and townhomes). **(Least Restrictive)**

- **Higher quality construction types (non-combustible), allow a developer to build a larger, taller building.**

Attachment B

Committee 517f027b-88e3-46db-9482-85a97833784a.doc
2/23/09 - Village Code 5-1-13

Village Amendment – Subject	Existing IBC Code <i>(no amendments)</i>	Comment & Suggestions	Fire District Comments
<p>1a. General Intent <u>Exterior walls</u> Fire Limits & non-combustible: For purposes of controlling Construction Type (materials), and preventing fire danger, the Fire Limits are established. Includes all real estate within the Village except for single family dwellings and units where there is not a dwelling unit above another & accessory blds. 503.2, & 501.3.2</p>	<p>Very few restrictions for use of wood commercial framing & wood siding</p> <p><i>Note: Wood construction adds fuel for fires.</i></p>	<p>1a <i>Non-combustible exterior walls have been a Village restriction, established in 1966 (ord. #330).</i></p> <p><i>Most existing Village commercial buildings comply with masonry ext. walls.</i></p>	<p>1a. Acceptable <i>see Orland Fire District comments</i></p>
<p>1b. <u>Exterior Walls, Commercial:</u> masonry or <u>non-bearing metal stud walls</u> required. 501.3.2 <i>Structural masonry or steel column and I-beams See Fire Limits</i></p>	<p>Exterior walls – IBC permits any wood framing (Type V) for all uses except Institutional (hospitals & nursing) and Hazardous buildings. <i>In Table 503</i></p>	<p>1b. <u>Exterior walls w/bearing metal studs.</u> Allow w/conditions for structural inspections by a qualified <u>3rd party inspection service.</u> My consider bearing metal studs with area and 2-3 story limits.</p>	<p>1b. Acceptable <i>see Orland Fire District comments</i></p>
<p>1c. <i>1-story office buildings</i> <u>Exterior walls</u> – All Commercial blds. of non-combustible materials w/<u>non bearing metal studs</u> for <u>all uses</u> except residential & townhouse units. 501.3.2</p>	<p>Same as above</p>	<p>1c. <i>1-story Offices less than 5,000 total square feet: allow stud wood ext. walls, 1-hour fire rated (V-A) w/brick veneer buildings. 30 feet between buildings on the same lot.</i></p>	<p>1c. Acceptable <i>see Orland Fire District comments</i></p>

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Village Amendment – Subject	Existing IBC Code (no amendments)	Comment & Suggestions	Fire District Comments
<p>See 1b. & 1d. Exterior Masonry Walls-Residential. Apartments and Condos. Solid masonry walls. Detached accessory garages less than 15’ to lot line require masonry exterior walls. 501.3.3 See Fire Limits</p>	<p>Exterior Wall Materials with a 1-hour fire rating supporting floor above. Any Construction types permitted (Wood = Type V)</p>	<p>See 1b. & 1d. Condo residential (R-2) – Allow steel stud ext. wall framing except for garage walls below residential require brick and concrete floors to protect residences above. Allow wood frame accessory blds to a 10’ setback. 10’ or less = steel studs.</p>	<p>1b & d. Acceptable see Orland Fire District comments</p>
<p>2a Multi-Family Units-Floors/Roof Condo Separation (condos) Floors shall be precast or engineered reinforced concrete of a two (2) hour fire rating. (406.2.10, 501.3.3, 711.3) Orland Park’s amendment allows this building type <u>without</u> fire sprinkler systems w/conditions: 1. A maximum of 10,000 total square feet of all floors between masonry fire walls. 2. Allow a maximum of 3 stories in height.</p>	<p>Residential Floors/Roof Separation: of any materials for separating dwelling units with 1-hour fire resistance (711.3), Note: Model Code requires all multi-family residential (R-2) buildings to have fire sprinkler protection.</p>	<p>2a Option 1 Non-combustible floor joist (metal bar joists), w/2 hour fire separation w/drop ceiling. Exception: Garages below residences must use concrete floors- existing code. Allow without fire sprinkler system similar to existing amendments 1 & 2.</p>	<p>2a. Acceptable see Orland Fire District comments</p>
<p>2b. Multi-Family Floors and Ceilings Floors shall be precast or engineered reinforced concrete of a two (2) hour fire rating. (406.2.10, 501.3.3, 711.3) Same as above.</p>	<p>See comments above. Technical note: Building Construction Type 3B allows up to 4 stories & 16,000 sf.</p>	<p>2b. Option 2 With Fire Sprinklers, allow wood floor framing with 2-hour fire rated floor rating. No penetrations with a drop ceiling and sound rating of 60 stc.</p>	<p>2b. Opposition to Change</p>

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<p>3. Residential Tenant Wall Separation – 2 hour fire rating. 3-wall system, No Penetrations, (310.3, <u>501.3.4</u>, Table 601 g. 708.3)</p>	<p>1-hour tenant separation 708.1. Type IIB, IIIB, & VB allows ½ hr. with fire sprinklers 708.3 <i>Exception</i></p>	<p>3. Reduction to a 1-hour (3-wall system) w/out penetrations & an STC sound rating of 60 in Fire Sprinkler protected buildings. (1207.2 & 1207.3)</p>	<p>3. Acceptable see Orland Fire District comments</p>
<p>4. Commercial Wall/Floor Separation between tenants. At least a 1-hour fire rated walls and floors (708.1)</p>	<p>No fire rating except for special hazards described in chapters 4 & 5 of the code.</p>	<p>4. When fully fire sprinkler protected, buildings can reduce the tenant floor and ceiling separations to ½ hr. and permit glass in walls facing lobbies only.</p>	<p>4. Acceptable see Orland Fire District comments</p>
<p>5a. Sprinkler System square feet areas. Assembly /Restaurant 74 seats & 5,000 sf.</p> <p>5b. Retail, Office, Business, Factory, Storage =8000, Woodworking 2,500 sf. Educational 1 sf. (903.2)</p>	<p>Restaurants- 5000 sf or 100 persons.</p> <p>Retail, Garage & Storage -12,000 sf., Business 19,000+,</p>	<p>5a. Restaurants allow to IBC Code.</p> <p>5b. Revise business office buildings allowing 10,000 sq. ft. without a fire sprinkler system. Existing 8,000 sf business area.</p>	<p>5a. Opposition to Change</p> <p>5b. Opposition to Change</p>
<p>6a. “Fire Walls” and Building Area Defined: for purposes of requiring fire sprinkler protection, “Fire Walls shall not be considered as separate buildings. (502.1). This amendment is general and applies to all construction types.</p>	<p>A “Fire Wall” can separate 1 building into 2 separate buildings to reduce area and fire sprinklers for attached buildings <i>This type of wall is required to be a masonry wall.</i></p>	<p>6a. Allow Fire Walls to act as separate (smaller) buildings in R-2 Condo. Uses. The removal of this code amendment will permit much larger buildings without fire sprinkler systems</p>	<p>6a. Opposition to Change</p>

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<p>Comments; Orland Park promoting fire sprinklers code section.</p> <p>Building Total Area Calculation. For the purposes of calculating total area (<i>determine fire sprinkler protection</i>), all floor levels shall be added together, including basements & mezzanines to figure building area. 903.1.2</p>	<p>Building Area. The area included within exterior walls and any horizontal projections of the roof or floors above. (<i>height and stories do not add to the area in Table 503</i>).</p>	<p>Comments</p> <p>Note; Village Ordinance is very restrictive by adding the areas of each floor to <u>calculate required fire sprinklers.</u></p>	<p>--</p>
<p>7a.</p> <p>Fire Alarm: Manual / automatic fire alarm and detection systems are required in all buildings unless they have a 100% sprinkler system. 907.2</p> <p>Automatic Fire Alarms are required in non-fire sprinkler protected buildings</p>	<p>Fire Alarm: A manual or auto alarm is required having an occupant load of 500 or more persons or more than 100 persons <u>above or below</u> ext. exit unless it has a 100% sprinkler system. Typical Use Groups A, B and M (907.2).</p>	<p>7a.</p> <p>Allow buildings with less than 5000 sf. and less than 50 persons, to have a local alarm only, when no type of fire suppression system, is installed or required. This exception does not apply to Institutional, residential or hazardous uses.</p> <p>← Model Code does not require <u>all</u> buildings to be alarmed. (Large Voids between the 2)</p>	<p>7a.</p> <p>Acceptable</p> <p><i>see Orland Fire District comments</i></p>

- 7a. **Fire Alarm not Required in Non-Sprinkled Buildings:** The Orland Fire District could agree with this proposal if the following conditions were added:
1. The buildings must be provided with a “local fire alarm system.”
 2. Occupancies that are required to have additional fire suppression systems (ex: a cooking hood suppression system) must install a full alarm system directly connected to the Orland Fire Dispatch Center.