

PART 1

R101.2 Scope. The provisions of the *International Residential Code for One- and Two-Family Dwellings* shall apply to the construction, *alteration*, movement, enlargement, replacement, *repair*, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings, *adult family homes*, and *townhouses* not more than three stories above *grade plane* in height with a separate means of egress and their *accessory structures* not more than three stories above *grade plane* in height.

Exceptions:

7. Multiplex buildings shall be permitted to be constructed in accordance with the *International Residential Code for One- and Two-Family Dwellings* except as modified by appendix XX.

SECTION R202 DEFINITIONS

[RB] BUILDING. Any one- or two-family *dwelling*, ~~or townhouse~~, or multiplex, or portion thereof, used or intended to be used for human habitation, for living, sleeping, cooking or eating purposes, or any combination thereof, or any *accessory structure*.

[RB] MULTIPLEX. A building of up to three stories, containing three to six dwelling units consolidated into a single structure with common walls and floors. ~~and a functional primary street entrance, or a building of up to three stories containing up to six dwelling units consolidated into a single structure.~~

PART 2

APPENDIX XX

MULTIPLEX BUILDINGS

User note:

About this appendix: *Appendix XX is intended to provide special requirements that in addition to this code, apply to multiplex buildings while maintaining life safety and public health, in an effort to provide more affordable construction of housing.*

SECTION XX101 GENERAL

XX101.1 Scope. *Multiplex buildings meeting the following conditions are permitted to be designed in accordance with the *International Residential Code* as modified by this appendix. Multiplex buildings are subject to all of the following conditions:*

1. There shall be no interior stairs or corridors, except when located completely within an

individual dwelling unit.

2. Use of [any portion of] the building is limited to residential (apartment) use only, with no common-use areas.
3. The total floor area of the building shall not exceed 8,000 square feet.
4. The building shall not exceed 3 stories above grade plane and shall not exceed 60 feet in height.

Exception. Mezzanines and lofts are permitted in accordance with sections R314 and R315.

Commented [MJ1]: Sounds like this will be updated/removed, to include interior stairs/circulation to units.

Commented [MJ2]: Regardless of if the definition above changes, you may have already covered here in the scope that it shall not exceed 3 stories.

A multiplex building not complying with all of the above conditions shall be designed in accordance with the *International Building Code*. Unless otherwise specified, multiplex buildings designed using this appendix shall comply with the provisions of the *International Fire Code* for Group R- 2 (apartment) occupancies. ~~For provisions, methods, or materials that are not provided herein, they shall be evaluated in accordance with the International Building Code for Group R-2 (apartment) occupancies.~~

Commented [MJ3]: This last sentence seems to conflict with the first sentence/part 1 scope language stating it should be designed in accordance with IRC code as modified by the appendix.

XX101.2 Modifications. Local jurisdictions are permitted to amend or supplement the provisions of this appendix following the procedure outlined in WAC 51-04-035 to address regional needs or hazards, subject to consistency with the intent of the IRC.

SECTION XX102

FIRE PROTECTION FEATURES

XX102.1 Dwelling unit separation. Dwelling units in multiplex buildings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating in accordance with one of the following:

1. The prescriptive fire resistance-rated assemblies in Section 721 of the International Building Code.
2. Where tested in accordance with ASTM E119, UL 263.
3. Where established by an analytical method in accordance with Section 703.2.2 of the *International Building Code*.

XX102.1.1 Continuity. Fire-resistance-rated floor/ceiling assemblies separating dwelling units shall extend to and be tight against the exterior wall, and fire resistance-rated wall assemblies separating dwelling units shall extend from the foundation to the underside of the roof sheathing.

XX102.1.2 Supporting construction. Floor/ceiling assemblies separating dwelling units shall be supported by construction having an equal or greater fire-resistance rating.

XX102.1.3 Openings. Openings in walls and floor/ceiling assemblies separating dwelling units shall not be permitted. Duct and air transfer openings between dwelling units shall

not be permitted.

XX102.1.4 Penetrations. Penetrations of fire resistance-rated wall or floor/ceiling assemblies separating dwelling units shall be protected in accordance with Section R302.4.

XX102.2 Multiplex building separation. *Multiplex buildings meeting the following conditions are permitted to be attached to other multiplex or townhouse buildings:*
Attached buildings contain no more than 12 total dwelling units.

XX102.3~~2~~ Automatic sprinkler system. *Multiplex Buildings shall be equipped throughout with an NFPA 13R automatic sprinkler system in accordance with Section 903.2.8 of the International Building Code.*

Exception. *Multiplex buildings that comply with all of the following conditions:*

- 1. Multiplex buildings containing no more than six total dwelling units; and*
- 2. Multiplex buildings that have dwelling units separated from each other by wall and floor assemblies having not less than a 2-hour fire-resistance rating in accordance with one of the following:*
 - a. The prescriptive fire resistance-rated assemblies in Section 721 of the International Building Code.*
 - b. Where tested in accordance with ASTM E119, UL 263.*
 - a-c. Where established by an analytical method in accordance with Section 703.2.2 of the International Building Code.*

XX102.4~~3~~ Portable fire extinguishers. Portable fire extinguishers having a minimum rating of 1-A:10-B:C shall be provided in each *dwelling unit* of a *multiplex building*.

XX102.5~~4~~ Fire Department Access and Water Supply. Fire department access and water supply shall comply with the locally adopted fire code. Alternative materials, design, or methods are subject to approval by the fire code official.

SECTION XX103 MEANS OF EGRESS

XX103.1 Multiplex Egress. *Multiplex buildings shall be provided with a means of egress in accordance with this section in addition to the requirements in Section R318.*

XX103.1.1 Egress configuration. The means of egress shall provide a continuous and unobstructed access to the public way. Each *dwelling unit* shall have a separate means of egress directly to the exterior of the building at *grade*, an egress balcony, an *open-ended corridor*, or an *exterior exit stair*.

Commented [MJ4]: Using total dwelling units as a close proxy for how many attached multiplexes are allowed.

12 units could break down into:
Two attached sixplexes;
Two attached fiveplexes;
Three attached fourplexes; &
Four attached triplexes.

Maintains only two attached buildings for multiplexes with the most units, while providing some design variability if doing buildings with less units.

Commented [MJ5]: The research or cost/benefit analysis I submitted on fire sprinklers in IRC buildings showed a median cost of around \$6.75 per sqft - meaning a multiplex that maxes the allowed size in the proposal would conservatively add \$54,000 to the building or \$9,000 to \$18,000 per unit (assuming the form of multiplex buildings is closer to colonial and townhouses).

Commented [MJ6]: Is this meant to say R318? I got that as being about protecting against subterranean termites. That is also probably relevant, but wanted to check

XX103.1.2 Wall separation. Exterior egress balconies, *open-ended corridors*, and *exterior exit stairways* shall be separated from dwelling units by wall assemblies having not less than a ½ hour fire-resistance rating. Doors shall have a 20-minute fire protection rating and shall be self-closing. Windows shall have a 20-minute fire protection rating.

Exception: Separation is not required where the exterior egress balcony is served by not less than two stairways, and a dead-end travel condition does not require travel past an unprotected opening to reach a stairway.

XX103.1.3 Width. Egress balconies and *open-ended corridors* shall be not less than 36 inches in width.

XX103.1.4 Means of egress illumination. Means of egress illumination shall be provided from the exterior of the *dwelling unit* to the *public way*. The means of egress illumination level under normal power shall be not less than 1 footcandle (11 lux) at the walking surface. Along *exit access stairways*, exit stairways, and at their required landings, the illumination level shall not be less than 10 footcandles (108 lux) at the walking surface when the stairway is in use.

XX103.1.5 Slip-resistant surface. The means of egress from the dwelling unit to the public way shall have a slip-resistant surface and be securely attached.

XX103.1.6 Egress balconies. Balconies used for egress purposes shall conform to this section in addition to the requirements in Section R318.3.

XX103.1.6.1 Openness. The long side of an egress balcony shall be not less than 50 percent open, and the open area above the guards shall be so distributed as to minimize the accumulation of smoke or toxic gases.

XX103.1.7 Open-ended corridor. *Open-ended corridors* shall be permitted to have an exterior stairway or ramp at only one end.

XX103.1.8 Exterior exit stairways. *Exterior exit stairways* and ramps serving as an exit component in a means of egress system shall comply with the requirements of this section.

XX103.1.8.1 Open side. *Exterior exit stairways* and ramps serving as an element of a required means of egress shall be open on not less than one side, except for required structural columns, beams, handrails, and guards. An open side shall have not less than 35 square feet (3.3 m²) of aggregate open area adjacent to each floor level and the level of each intermediate landing. The required open area shall be located not less than 42 inches (1067 mm) above the adjacent floor or

landing level.

XX103.1.8.2 Side yards. The open areas adjoining *exterior exit stairways* or ramps shall be either *yards, courts, or public ways*. The remaining sides are permitted to be enclosed by the exterior walls of the building.

XX103.1.9 Maintenance. The means of egress shall be maintained in a manner that does not reduce the number of exits or the minimum width of the means of egress to less than required by this appendix.

SECTION XX104 PARKING REQUIREMENTS

XX104.1 On-site parking. Where provided, on-site parking shall comply with this section.

XX104.1.1 Electrical vehicle charging infrastructure. EV charging infrastructure shall be provided in accordance with Section 429 of the *International Building Code* for Group R occupancies.

XX104.1.2 Accessible parking spaces. Accessible parking spaces shall be provided in accordance with Section 1106 of the *International Building Code* for Group R-2 occupancies.

Exception. ~~Multiplex buildings containing no more than three dwelling units.~~

Commented [MJ7]: Given accessibility regulations kick in at 4 or more units in a single building, and single-family homes, duplexes, nor townhouses have to provide accessible parking spaces under the IRC, I think than at least triplexes shouldn't have to do accessible parking either.

Instead if accessible parking is added to this proposal, than at least align it with when other accessibility regulations kick in.

SECTION XX105 ACCESSIBILITY

XX105.1 Scope. Where there are four or more *dwelling units* in a single structure, the provisions of Chapter 11 of the *International Building Code* shall apply. *Multiplex* buildings shall be considered a Group R-2 (apartment) occupancy for the purpose of accessibility requirements.

SECTION XX106 ELEVATORS AND PLATFORM LIFTS

XX106.1 Elevators and platform lifts. Where provided, elevators and platform lifts shall be constructed in accordance with Section R321 ~~except as indicated in this section.~~

XX106.1.1 Elevators. ~~Elevators installed in multiplex buildings shall comply with Chapter 30 of the International Building Code.~~

Exception. ~~Elevators located within an individual dwelling unit.~~

Commented [MJ8]: Applying Chapter 30 of the IBC would make 3002.4 (ambulance stretcher elevator) apply, as the state code requires an ambulance stretcher elevator for any R-1, R-2, or I occupancy building regardless of the number of stories - if an elevator is added.

Meaning, applying this would essentially kill any of these buildings from adding elevators. R321 would allow projects a chance at adding the smaller elevators that meet A17.1 standards.

SECTION XX107 HABITABLE ATTICS

XX107.1 General. *Habitable attics* are not permitted in *multiplex* buildings.

SECTION XX108 SOUND TRANSMISSION

XX108.1 General. Wall and floor-ceiling assemblies separating *multiplex dwelling units*, or those separating adjacent *multiplex* or *townhouse* buildings, shall provide airborne sound insulation for walls, and both airborne and impact sound insulation for floor-ceiling assemblies in accordance with Section 1206 of the *International Building Code*.

Commented [MJ9]: I was not able to find solid cost comparisons for this topic. I was able to find traces of information that suggest the double walls between attached townhouses rates at or close to 50 STC (even though that's not required to reach that number in the IRC).

The cost comparisons I was able to find was in a reddit thread and was comparing sound proof doors. When it came to doors the jump in price was more significant when comparing a high 30 STC door to a door in the 40-50 STC range (\$1,000+ difference).

Given all of that, the comments for architects at the meeting, and that all recent builds of multiplexes were being built to 50 STC, I've softened my initial reticence and suggested just going to STC 50 if this is going to be included.