

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.

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 in accordance with [RCW 19.27.800](#).*

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.

Exception. Common-use areas used for bicycle parking, mail packages, shared laundry, or trash bins are permitted ~~when such spaces are separated by wall and floor assemblies having not less than a 1-hour fire resistance rating in accordance with XX102.1 and a self-closing door that has a 1-hour fire protection rating~~ [such areas are separated from the rest of the building in accordance with Section XX102.3](#).

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.

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.

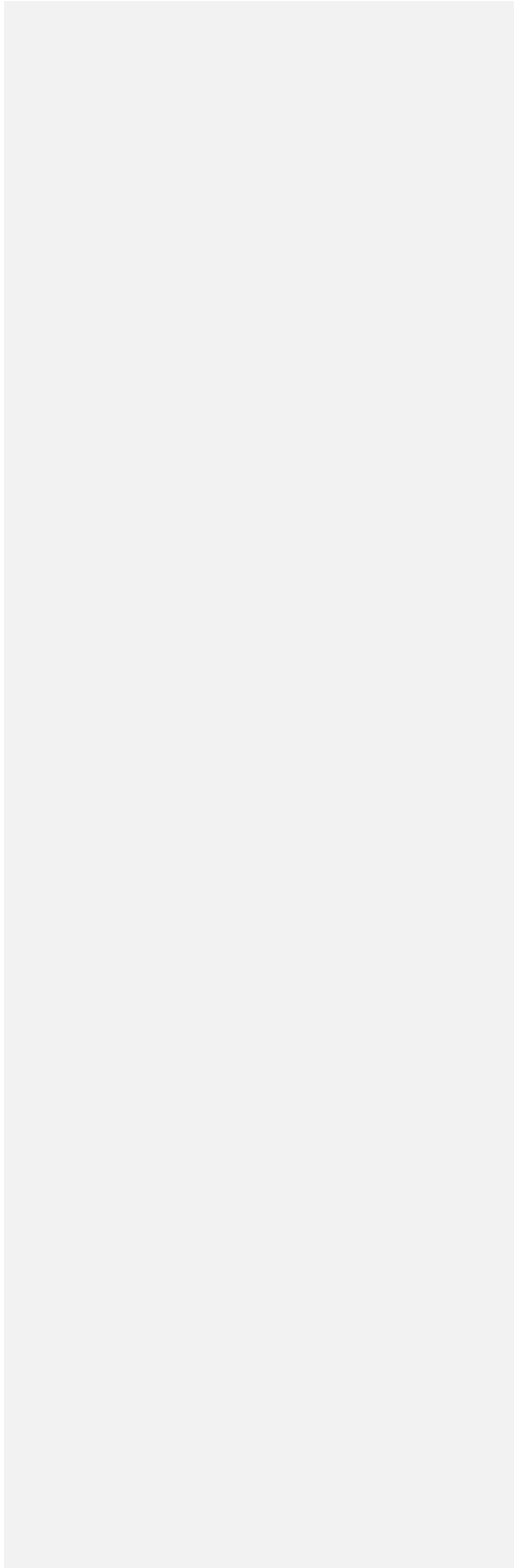
XX101.2 Modifications.

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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.

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**SECTION XX102
FIRE PROTECTION FEATURES**

XX102.1 ~~Dwelling unit separation~~ Fire resistance rated assemblies.

~~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~~ Where fire resistance rated assemblies are required by this appendix, the assemblies shall comply with this section. Fire resistance ratings shall be determined 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 or floor sheathing.

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

XX102.2 Opening protectives. Opening protectives and smoke and draft control assemblies required by this appendix shall comply with this section.

102.2.1 Fire protection ratings. Fire protection ratings for opening protectives shall be determined in accordance with NFPA 252 or UL 10C. Opening protectives shall be labeled in accordance with those standards.

102.2.2 Smoke and draft control. Smoke and draft control assemblies shall be tested and labeled in accordance with UL 1784.

XX102.3 Dwelling unit and common use area separations. Dwelling units in multiplex buildings shall be separated from each other by wall and floor/ceiling assemblies having not less than a 1-hour fire resistance rating. Common use areas shall be separated from other portions of the building by wall and floor/ceiling assemblies having not less than a 1-hour fire resistance rating.

~~XX102.1.3~~ XX102.3.1 Openings.

Openings in walls and floor/ceiling assemblies separating *dwelling units* or separating dwelling units from common use areas shall not be permitted. Duct and air transfer openings between *dwelling units* or between dwelling units and common use areas shall not be permitted.

Commented [JS2]: Do the standards contain labeling requirements? Same question for smoke and draft control assemblies.

Commented [JS3]: Do we need the air leakage rate, etc. from IBC 716.2.2.1? Or will the label take care of that?

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Openings in walls separating dwelling units from the means of egress shall comply with Section XX103.

Openings in walls separating common use areas from the means of egress shall be provided with opening protectives with a minimum fire protection rating of 1-hour

~~XX102.1.4~~**XX102.3.2 Penetrations.**

Penetrations of fire resistance-rated wall or floor/ceiling assemblies ~~separating dwelling units~~ shall be protected in accordance with Section R302.4. Penetrations of interior exit stairway walls or floor/ceiling assemblies shall also comply with Section XX103.4.2.

~~XX102.2~~**XX102.4 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*.

~~XX102.3~~**XX102.5 Portable fire extinguishers.**

Portable fire extinguishers having a minimum rating of 2-A:10-B:C shall be provided in each *dwelling unit* of a *multiplex building*.

~~XX102.4~~**XX102.6 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.

~~XX102.5~~**XX102.7 Fire Separation Distance.**

Fire separation distances for *Multiplex Buildings* shall be in accordance with Table R302.1(1).

**SECTION XX103
MEANS OF EGRESS**

XX103.1 General. Spaces in multiplex buildings shall be provided with a minimum of one means of egress in accordance with this section in addition to the requirements in Section R318. Multiplex buildings with dwelling units having access to a single means of egress from a first, second, or third story above grade plane shall have a maximum of 4 dwelling units on each story.

User note: Figures XX103.1(1) through XX103.1(Z) are provided to illustrate examples of protection for the means of egress. They are for information only, and do not supersede requirements in the text of this appendix.

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XX103.1.1 Means of egress continuity. The means of egress for a multiplex building shall be continuous in accordance with all of the following:

1. The means of egress shall provide continuous and unobstructed access to the public way. Elements of the means of egress are permitted to include corridors, egress balconies, interior exit stairs, ~~or~~ exterior exit stairs, exterior exit doors, or a combination of those elements.

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2. The path of egress travel along a means of egress shall not pass through other rooms or uses. Interior and exterior exit stairways shall be continuous from the point of entry into the stair to the exterior of the building.

Exception: Interior and exterior exit stairways are permitted to terminate at an exit passageway at the ground level provided both of the following conditions are met:

1. The exit passageway is only used for egress or access to dwelling units or common uses or facilities allowed by Section XX101.1.
2. The exit passageway is separated from the rest of the building by a minimum of 1-hour fire resistance rated construction and fire door assemblies with an opening protection rating of not less than 1 hour.

Commented [JS6]: Per 11/18 TAG discussion.

3. The level of protection shall not be diminished along the path of egress travel.

4. Obstructions shall not be placed in the minimum width of a means of egress component except projections permitted by this code.

XX103.1.2 Width. The means of egress from the dwelling unit to the public way shall be not less than 36 inches in width.

XX103.1.3 Travel distance. Travel distance from the most remote portion of a story to an exterior exit door or an interior or exterior exit stair shall not exceed 125 feet.

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XX103.1.4 Doors. Doors in the path of egress travel from dwelling units or common use areas to the public way that are required to have a fire protection rating, and exterior exit doors shall comply with following:

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Commented [JS8]: Added to clarify scope

1. The minimum clear opening width of doorways shall not be less than 32 inches (813 mm). The clear opening width of doorways with swinging doors shall be measured between the face of the door and the frame stop, with the door open 90 degrees (1.57 rad). The minimum clear opening height of doorways shall be not less than 80 inches (2032 mm).
2. Doors shall be of the side-hinged swinging type.
3. The operational force to unlatch the door shall not exceed 15 pounds.
4. The door shall not require more than a 30-pound force to be set in motion and shall move to a full-open position when subjected to not more than a 15-pound force.
5. There shall be a floor or landing on each side of a door, at the same elevation on each side of the door.
Exception: Landings at exterior exit doors are permitted to be not more than 7 inches below the landing on the egress side of the door, provided that the door does not swing over the landing.
6. Landings at doors shall have a width of not less than 3 feet. Doors in the fully open position shall not reduce a required dimension by more than 7 inches.
7. Thresholds at doorways shall not exceed ½ inch above the finished floor or landing.
8. Doors required to have a fire protection rating shall be self-closing and provided with an active latch bolt that will secure the door when it is closed.
9. Doors shall be readily openable from both sides without the use of a key or special knowledge or effort.
Exception: Stairway exit doors are permitted to be locked from the side opposite the egress side where the only interior access to dwelling units is from an exit stairway.
10. Unlatching of doors shall not require more than one motion in a single linear or rotational direction to release the latching and locking device. Manual bolts are not permitted.

XX103.1.5 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

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illumination level under normal power shall be not less than 1 footcandle (11 lux) at the walking surface. Along 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.

XX103.1.6 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.

XX103.1.7 Guards. Guards shall comply with Section R321, except guards adjacent to the means of egress shall have a minimum height of 42 inches.

XX103.1.7 Maintenance. The means of egress shall be maintained in a manner that does not reduce the minimum width or protection of the means of egress to less than required by this appendix.

XX103.2 Corridors and exterior egress balconies. Corridors and exterior egress balconies used for egress purposes in a means of egress system shall comply with this section.

XX103.2.1 Corridors. Corridors shall comply with the following:

1. A minimum width of 36" shall be provided for all corridors.
2. Corridors are limited to 20 feet maximum in length.
3. Air supplied to corridors shall not be considered as providing ventilation air to individual dwelling units where the air supplied is 100 percent outside air, where units have conforming ventilation air independent of the air supplied to the corridor, and where the supply fan will automatically shut off upon activation of the corridor smoke detector.

XX103.2.1.1 Corridor protection. A 30 minute fire resistance rating is required for all corridor walls. Corridor walls shall have a fire resistance rating of not less than ½ hour. Openings in corridor walls shall be protected by smoke and draft control assemblies with a 1/3 hour fire protection rating.

Exception: Exterior walls in corridors are permitted to be unrated when a fire separation distance greater than 10 feet is provided.

XX103.2.2 Egress balconies. Egress balconies used for egress purposes shall conform to the same requirements as corridors for minimum width and length.

XX103.2.2.1 Egress balcony protection. Exterior egress balconies shall be separated from the interior of the building by walls and opening protectives as required for corridors.

Commented [JS9]: Revised to parallel IBC 708.3.

Hours vs minutes for ratings is inconsistent in the IBC. Fire resistance ratings are usually in hours. Using hourly ratings for opening protectives corresponds with IBC Table 716.1(2), although other text in 716 uses minutes.

Commented [JS10]: Added opening protection

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XX103.2.2.2 Openness. Exterior egress balconies shall be a minimum of 50 percent open, and the open area above the guards shall be constructed to minimize the accumulation of smoke.

XX103.2.2.3 Location. Exterior egress balconies shall have a minimum fire separation distance of 10 feet measured at right angles from the exterior edge of the egress balcony to the following:

1. Adjacent lot lines.
2. Other portions of the building.
3. Other buildings on the same lot.

For the purposes of this section, other portions of the building shall be treated as separate buildings.

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Commented [JS12]: Delete. Unnecessary in this context.

XX103.3 Exit stairways. Interior and exterior exit stairways shall comply with this section. Winder treads, spiral stairways, alternating tread devices, ship's ladders, or ladders are not permitted in interior or exterior exit stairways.

XX103.3.1 Riser height and tread depth. Stairs in exit stairways shall have a maximum riser height of 7 inches, and a minimum tread depth of 11 inches.

XX103.3.2 Stairway landings. There shall be a floor or landing at the top and bottom of each stairway. The width of landings, measured perpendicularly to the direction of travel, shall be not less than 3 feet. Every landing shall have a minimum depth, measured parallel to the direction of travel, of not less than 3 feet. When fully open, doors shall not project more than 7 inches into the required width of a landing.

XX103.3.3 Outdoor conditions. Outdoor stairways and outdoor approaches to stairways shall be designed so that water will not accumulate on walking surfaces.

XX103.3.4 Openings. Openings in interior and exterior exit stairways other than unprotected exterior openings shall be limited to those necessary for egress from dwelling units, openings for egress from common use spaces allowed in accordance with Section XX103.1.1, and for egress from the enclosure.

XX103.3.5 Exterior walls of exit stairways. Exterior walls of exit stairways shall comply with the requirements of Section R302.1 for exterior walls. Where nonrated walls or unprotected openings enclose the exterior of the stairway and the walls or openings are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), building construction within 10 feet (3048 mm) of the exterior walls of the exit stairway shall comply with Section XX103.4.1 or XX103.5.4 as applicable.

XX103.4 Interior exit stairways. Interior exit stairways serving as an exit component in a means of egress system shall comply with the requirements of this section. An interior

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exit stairway shall not be used for any purpose other than as a means of egress and a circulation path.

XX103.4.1 Interior exit stairway construction and openings. Interior exit stairway enclosures in multiplex buildings shall have a fire-resistance rating of not less than 1 hour. Openings in interior exit stairways and ramps other than unprotected exterior openings shall be protected by fire door assemblies with a fire protection rating of not less than 1 hour.

Commented [JS13]: Delete. We are not anticipating ramps within the building.

Elevators shall not open into interior exit stairways and ramps.

XX103.4.2 Penetrations. Penetrations into or through interior exit stairways are prohibited except for the following:

1. Fire protection systems.
2. Security systems.
3. Electrical raceway serving the interior exit stairway and terminating at a steel box not exceeding 16 square inches (0.010 m²).
4. Structural elements, such as beams or joists, supporting the interior exit stairway or enclosure.
5. Structural elements, such as beams or joists, supporting a roof at the top of the interior exit stairway.

Such penetrations shall be protected in accordance with Section R302.4.

Exception: Membrane penetrations shall be permitted on the outside of an interior exit stairway. Such penetrations shall be protected in accordance with Section R302.4.2.

XX103.4.3 Enclosures under interior stairways. The walls and soffits within enclosed usable spaces under enclosed and unenclosed stairways shall be protected by 1-hour fire-resistance-rated construction. Access to the enclosed space shall not be directly from within the stairway enclosure.

XX103.5 Exterior exit stairways. Exterior exit stairways serving as an exit component for multiplex buildings shall comply with the requirements of this section.

XX103.5.1 Exterior exit stairway open side. Exterior exit stairways 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.

Commented [JS14]: Note: IBC does not require opening to be "constructed to minimize accumulation of smoke." Compare with exterior exit balconies.

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XX103.5.2 Side yards adjoining exterior exit stairways. The open areas adjoining exterior exit stairways shall be either yards, courts, or public ways. The remaining sides are permitted to be enclosed by the exterior walls of the building.

XX103.5.3 Exterior exit stairway location. Exterior exit stairways shall have a minimum fire separation distance of 10 feet (3048 mm) measured at right angles from the exterior edge of the stairway or ramps, including landings, to:

1. Adjacent lot lines.
2. Other buildings on the same lot unless the adjacent building exterior walls and openings are protected in accordance with Table R302.1(1) based on fire separation distance.

XX103.5.4 Exterior exit stairway construction and opening protection. Exterior exit stairways shall be separated from the interior of the building by assemblies having a fire resistance rating of not less than 1 hour. Openings in exterior exit stairways other than unprotected exterior openings shall be protected by fire door assemblies with a fire protection rating of not less than $\frac{3}{4}$ hour.

Where a vertical plane projecting from the edge of an exterior exit stairway and landings is exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the exterior wall shall be rated in accordance with this subsection.

XX103.5.5 Enclosures under exterior stairways. The open space under exterior stairways shall not be used for any purpose.

Exception: Usable space under exterior exit stairways is permitted provided the space is completely enclosed in 1-hour fire-resistance-rated construction.

XX103.6 Ramps. Exterior ramps from an exterior exit door to the public way shall comply with the following:

1. Ramps shall have a running slope not steeper than 1 unit vertical in 12 units horizontal (8.3 percent slope).
2. The slope measured perpendicular to the direction of travel of a ramp shall not be steeper than one unit vertical in 48 units horizontal (2-percent slope).
3. The rise for any ramp run shall be 30 inches (762 mm) maximum.
4. Ramps shall be not less than 36 inches in width.
5. Ramps shall have landings at the bottom and top of each ramp, points of turning, entrance, exits, and at doors.
6. Ramp landings shall be not less than 60 inches in length or width.

7. Exterior ramps and approaches to exterior ramps shall be designed so that water will not accumulate on walking surfaces.

~~XX103.1 Multiplex Egress.~~

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

~~**XX103.1.1 Egress configuration.** The means of egress shall provide 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*.~~

~~**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.**~~

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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.

Where there are four or more *dwelling units*, accessible parking spaces shall be provided in accordance with Section 1106 of the *International Building Code* for Group R-2 occupancies.

**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.

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**SECTION XX106
ELEVATORS AND PLATFORM LIFTS**

XX106.1 Elevators.

Where provided in *multiplex* buildings for common use, passenger elevators, limited-use and limited-application elevators shall comply with ASME A17.1/CSA B44.

XX106.2 Platform Lifts

Where provided, platform lifts shall comply with ASME A18.1.

XX106.3 Accessibility

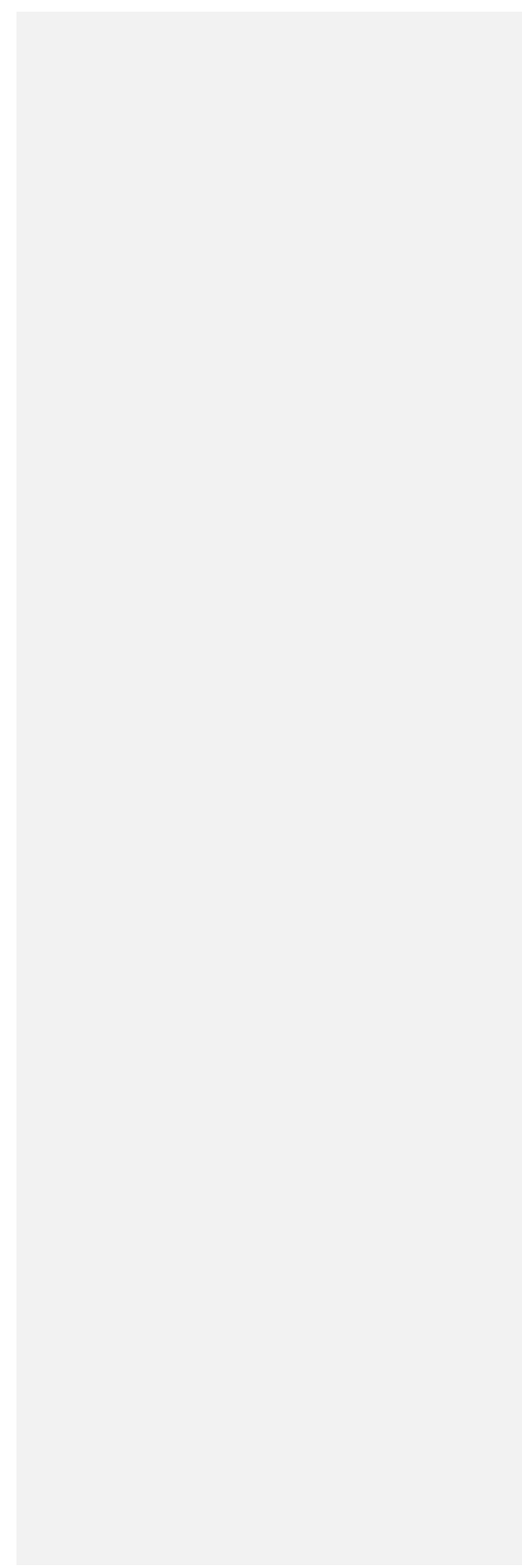
Elevators or platform lifts that are part of an accessible route required by Chapter 11 of the *International Building Code*, shall comply with ICC A117.1

**SECTION XX107
HABITABLE ATTICS**

XX107.1 General.

Habitable attics are not permitted in *multiplex* buildings.

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**SECTION XX108
STRUCTURAL PROVISIONS**

XX108.1 Lateral Design.

The lateral force resisting system for *Multiplex Buildings* in Seismic Design Category D₂ exceeding two stories shall be designed by a registered design professional in accordance with accepted engineering practice.

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