

TOWNHOUSE REQUIREMENTS

Please Note That Some Of The Referenced Code Sections Are Amendments To The 2018 NC Residential Code And Can Be Found At:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Codes - Current_and_Past&user=State_Building_Codes

All Building Codes Can be Found At:

<https://codes.iccsafe.org/public/collections/NC>

This 2018 Guideline may be used in lieu of 2012 code until 12-31-2018 and is mandatory beginning 1-1-2019

- A site drawing will need to be submitted with plans providing lot line locations.
- A surveyed plat will need to be provided reflecting approved plans by permitting.
- **TOWNHOUSE.** A single-family dwelling unit constructed in a group of three or more attached units separated by property lines in which each unit extends from the foundation to roof and with a yard or public way on at least two sides.
- **R302.1 Exterior walls.** Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1.
 - Exceptions:**
 1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the fire separation distance. Townhouse eave projections shall comply with Sections R302.2.5 and R302.2.6.
 2. Walls of dwellings and accessory buildings located on the same lot.
 3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.
 4. Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm).
 5. Foundation vents installed in compliance with this code are permitted.
- **R302.1.1 Soffit protection.** In construction using vinyl or aluminum soffit material, the following application shall apply. Soffit assemblies located on buildings with less than a 10 feet fire separation distance shall be securely attached to framing members and applied over fire-retardant treated wood, 23/32-inch wood sheathing or 5 /8-inch exterior grade or moisture-resistant gypsum board. Venting requirements shall be provided in both soffit and underlayments. Vents shall be either nominal 2-inch (51mm) continuous or equivalent intermittent and shall not exceed the minimum net free air requirements established in Section R806.2 by more than 50 percent. Townhouse construction shall meet the additional requirements of Sections R302.2.5 and R302.2.6.
 - Exceptions:**
 1. Any portion of soffits having 10 feet or more fire separation distance.
 2. Roof rake lines where soffit does not communicate to attic are not required to be protected per this section.
 3. Soffits with less than 3 feet fire separation distance shall meet the projection fire rating requirements of Table R302.1.
 4. Soffits between buildings located on the same lot.
- **R302.1.2 Flame spread.** Vinyl siding and vinyl soffit materials shall have a Flame Spread Index of 25 or less as tested in accordance with ASTM E-84.
- **R302.2 Townhouses.** Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.
 - Exception:** If an automatic residential fire sprinkler is installed, a common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Section R302.4.
- Townhouses by code are required to have an automatic sprinkler system but the 1st exception allows for an automatic sprinkler system to be deleted.

SECTION R313

AUTOMATIC FIRE SPRINKLER SYSTEMS R313.1 Townhouse automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in townhouses.

Exceptions:

1. Townhouses constructed with a common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119 or UL 263 provided such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall(s) shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations in the

separation walls shall be installed in accordance with the North Carolina Electrical Code Chapters 34 through 43. Penetrations for electrical outlet boxes shall be in accordance with Section R302.4.

2. An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

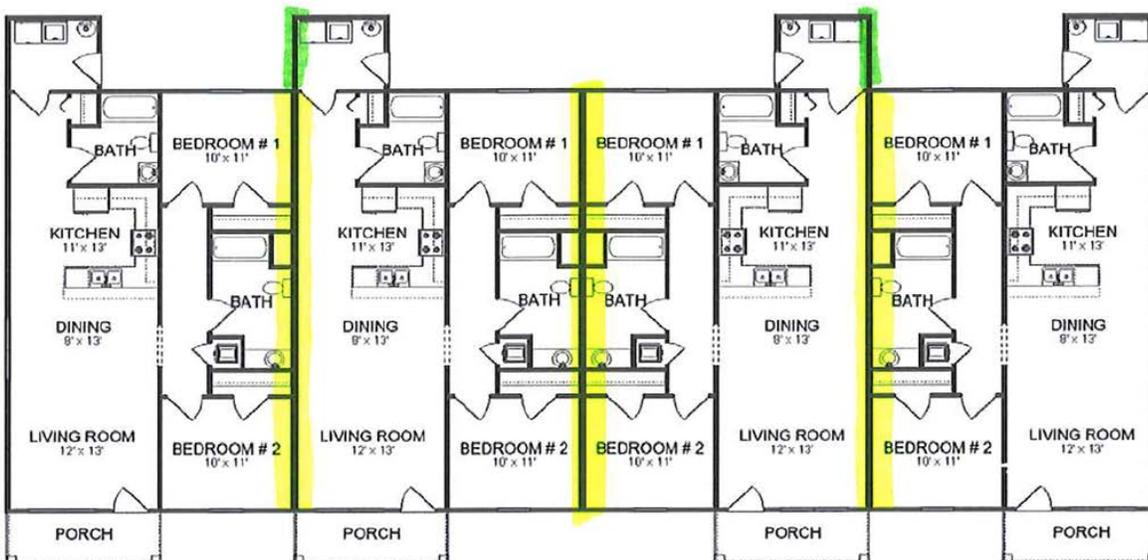
- Any fire-resistance-rated wall being constructed shall meet the requirements for continuity per **R302.2.1 Continuity**. The fire-resistance-rated wall or assembly separating townhouses shall be continuous from the foundation to the underside of the roof sheathing, deck or slab, or exterior wall sheathing. The fire-resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached enclosed accessory structures.
- The figure below is highlighted showing two types of walls: highlighted in **yellow** is the fire-resistance-rated wall assembly or fire-resistance-rated wall assemblies separating the dwelling units constructed per 2018 NCRC R302.2 and 2018 NCRC R313.1 see **Exception 1**. The second type being the continuation of the house wall highlighted in **green**, this wall shall be 1-hour fire-resistance rated wall as per 2018 NCRC Table R302.1 (being 1-hour because it is on a 0 distance lot line).

**TABLE R302.1
EXTERIOR WALLS**

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	(Fire-resistance rated)	1 hour-tested in accordance with ASTM E119 or UL 263 with exposure from both sides	≤ 3 feet
	(Not fire-resistance rated)	0 hours	≥ 3 feet
Projections	(Fire-resistance rated)	1 hour on the underside	≤ 3 feet
	(Not fire-resistance rated)	0 hours	≥ 3 feet
Openings in walls	Not allowed	N/A	< 3 feet
	Unlimited	0 hours	≥ 3 feet
Penetrations	All	Comply with Section R302.4	≤ 3 feet
		None required	≥ 3 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.



- Townhouses shall be constructed with parapets per R302.2.2 **Look at the Exception R302.2.2 Parapets for townhouses**. Parapets constructed in accordance with Section R302.2.3 shall be constructed for townhouses as an extension of exterior walls or common walls in accordance with the following:
 1. Where roof surfaces adjacent to the wall or walls are at the same elevation, the parapet shall extend not less than 30 inches (762 mm) above the roof surfaces.
 2. Where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is not more than 30 inches (762 mm) above the lower roof surface.

Exception: A parapet is not required in the two cases above when the roof is covered with a minimum class C roof covering complies with a minimum Class C rating as tested in accordance with ASTM E108 of UL 790, and the roof decking or sheathing is of

noncombustible materials or approved fire-retardant-treated wood for a distance of 4 feet (1219 mm) on each side of the wall or walls, or one layer of 5/8-inch (15.9 mm) Type X gypsum board is installed directly beneath the roof decking or sheathing, supported by a minimum of nominal 2-inch (51 mm) ledgers attached to the sides of the roof framing members, for a minimum distance of 4 feet (1219 mm) on each side of the wall or walls. No openings or penetrations including dormers allowed within this 4 foot (1219 mm) protected area.

3. A parapet is not required where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is more than 30 inches (762 mm) above the lower roof. The common wall construction from the lower roof to the underside of the higher roof deck shall have not less than a 1-hour fire-resistance rating. The wall shall be rated for exposure from both sides.
- **R302.2.3 Parapet construction.** Parapets shall have the same fire-resistance rating as that required for the supporting wall or walls. On any side adjacent to a roof surface, the parapet shall have noncombustible faces for the uppermost 18 inches (457 mm), to include counter flashing and coping materials. Where the roof slopes toward a parapet at slopes greater than 2 unit's vertical in 12 unit's horizontal (16.7-percent slope), the parapet shall extend to the same height as any portion of the roof within a distance of 3 feet (914 mm), but in no case shall the height be less than 30 inches (762 mm).
 - **R302.2.4 Structural independence.** Each individual townhouse shall be structurally independent.
Exceptions:
 1. Foundations supporting exterior walls or common walls.
 2. Structural roof and wall sheathing from each unit may fasten to the common wall framing.
 3. Nonstructural wall and roof coverings.
 4. Flashing at termination of roof covering over common wall.
 5. Townhouses separated by a common as provided in Section R302.2.
 - Townhouse with three or more attached dwellings will require eave protection per **R302.2.5 Townhouse eave protection.** In townhouse construction (with three or more attached dwellings) projections extending into the fire separation distance shall have not less than 1-hour fire resistive construction on the underside. Soffit material beyond the fire separation distance shall be securely attached to framing members and shall be constructed using either noncombustible soffit material; fire-retardant-treated soffit material; vinyl soffit installed over 3/4-inch (19 mm) wood sheathing or 5/8-inch (16 mm) gypsum board; or aluminum soffit installed over 3/4-inch (19 mm) wood sheathing or 5/8-inch (16 mm) gypsum board. Venting requirements shall be provided in both soffit and underlayment's. Vents shall be either nominal 2-inch (51 mm) continuous or equivalent intermittent and shall not exceed the minimum net free air requirements established in Section R806.2 by more than 50 percent.
Vents in soffit are not allowed within 4 feet (1219 mm) of fire walls or property lines.
 - All townhouses shall comply with eave projections per - **R302.2.6 Townhouse eave projections.** Overhang projections not exceeding 12 inches (305 mm) shall be allowed to extend beyond the property line in townhouse buildings provided all the following conditions are met:
 1. Required fire resistant rated wall assembly is tight to roof deck;
 2. Eaves shall be protected with roof decking and fascia of non-combustible materials or approved fire-retardant-treated wood; and
 3. Eaves shall have not less than one layer of 5/8-inch type X gypsum or equivalent fire-resistive construction on the underside.
 - **R302.2.7 Sound transmission.** See Appendix K.
 - Townhouses that have four or more dwellings or sleeping units are in a single structure shall comply per - **SECTION R320 ACCESSIBILITY R320.1 Scope.** Where there are four or more dwelling units or sleeping units in a single structure, the provisions of Chapter 11 of the International Building Code for Group R-3 shall apply.
 - Townhouses requiring to meet **2018 NCBC 1107.6.3 Group R-3.** In Group R-3 occupancies where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.
 - The exception to 2018 NCBC 1107.6.3 is that if there are four or more dwelling or sleeping units that are multiple stories without elevators then it would not be required to make them *Type B units*.
 - If there are any single story units mixed with any multi story units within the building structure constructed in a row of attached units that has four or more dwelling or sleeping units than each of the single story units would be required to be *Type B units*. The example to this is below and is **highlighted in yellow**. (see drawing next page)



- The requirements for *Type B units* ICC A117.1-09 1004 **Type B Units** can be found: https://codes.iccsafe.org/public/document/ICCA117_12009/chapter-10-dwelling-units-and-sleeping-units

(Below is the text without example drawings)

All codes referenced below are found in ICC A117.1-09

1004 Type B Units

1004.1 General. Type B units shall comply with section 1004.

1004.2 Primary Entrance. The accessible primary entrance shall be on an accessible route from public and common areas. The primary entrance shall not be to a bedroom unless it is the only entrance.

1004.3 Accessible Route. Accessible routes within Type B units shall comply with Section 1004.3.

1004.3.1 Location. At least one accessible route shall connect all spaces and elements that are a part of the unit. Accessible routes shall coincide with or be located in the same area as a general circulation path.

Exceptions:

1. An accessible route is not required to unfinished attics and unfinished basements that are part of the unit.
2. One of the following is not required to be on an accessible route.
 - 2.1 A raised floor area in a portion of a living, dining, or sleeping room; or
 - 2.2 A sunken floor area in a portion of a living, dining, or sleeping room; or
 - 2.3 A mezzanine that does not have a plumbing fixtures or an enclosed habitable space.

1004.3.2 Components. Accessible routes shall consist of one or more of the following elements: walking surfaces with a slope not steeper than 1:20, doors and doorways, ramps, elevators, and platform lifts.

1004.4 Walking Surfaces. Walking surfaces that are part of an accessible route shall comply with Section 1004.4.

1004.4.1 Clear Width. Clear width of an accessible route shall comply with Section 403.5.

1004.4.2 Changes in Level. Changes in level shall comply with Section 303.

EXCEPTION: Where exterior deck, patio, deck, or balcony surface materials are impervious, the finished exterior impervious surface shall be 4 inches (100 mm) maximum below the floor level of the adjacent interior spaces of the unit.

1004.5 Doors and Doorways. Doors and Doorways shall comply with Section 1004.5.

1004.5.1 Primary Entrance Door. The primary entrance door to the unit shall comply with Section 404.

EXCEPTION: Storm and screen doors serving individual dwelling or sleeping units are not required to comply with Section 404.2.5.

1004.5.2 User Passage Doorways. Doorways intended for user passage shall comply with section 1004.5.2

1004.5.2.1 Clear Width. Doorways shall have a clear opening of 31 ¾ inches (805 mm) minimum. Clear opening of swinging doors shall be measured between the face of the door and stop, with the door open 90 degrees.

1004.5.2.1.1 Double Leaf Doorways. Where the operable part on an inactive leaf of a double leaf doorway are located more than 48 inches (1220 mm) or less than 15 inches (380 mm) above the floor, the active leaf shall provide the clearance required by Section 1004.5.2.1.

1004.5.2.2 Thresholds. Thresholds shall comply with Section 303.

EXCEPTION: Thresholds at exterior sliding doors shall be permitted to be ¾ inch (19 mm) maximum in height, provided they are beveled with a slope not steeper than 1:2.

1004.5.2.3 Automatic Doors: Automatic doors shall comply with Section 404.3.

1004.6 Ramps. Ramps shall comply with Section 405.

1004.7 Elevators. Elevators within the unit shall comply with Section 407, 408, or 409.

1004.8 Platform Lifts. Platform lifts within the unit shall comply with Section 410.

1004.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections 309.2 and 309.3.

EXCEPTIONS:

1. Receptacle outlets serving a dedicated use.
2. Where two or more receptacle outlets are provided in a kitchen above a length of counter top that is uninterrupted by a sink or appliance, one receptacle outlet shall not be required to comply with Section 309.
3. Floor receptacle outlets.
4. HVAC diffusers.
5. Controls mounted on ceiling fans.
6. Controls or switches mounted on appliances.
7. Plumbing fixture controls.
8. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
9. Where redundant controls others than light switches are provided for a single element, one control in each space shall not be required to be accessible.
10. Within kitchens and bathrooms, lighting controls, electrical switches and receptacle outlets are permitted to be located over cabinets with counter tops 36 inches (915 mm) maximum in height and 25 ½ inches (650 mm) maximum in depth.

1004.10 Laundry Equipment. Washing Machines and clothes dryers shall comply with Section 1004.10.

1004.10.1 Clear Floor Space. A Clear floor space complying with Section 305.3, shall be provided. A parallel approach shall be provided for a top loading machine. A forward or parallel approached shall be provided for a front loading machine.

1004.11 Toilet and Bathing Facilities. Toilet and bathing fixtures shall comply with Section 1004.11.

EXCEPTION: Fixtures on levels not required to be accessible.

1004.11.1 Grab Bar and Shower Seat Reinforcement. Reinforcement shall be provided for the future installation of grab bars and shower seats at water closets, bathtubs, and shower compartments. Where walls are located to permit the installation of grab bars and seats complying with Section 604.5 at water closets; grab cars complying with Section 607.4 at bathtubs; and for grab bars and shower seats complying with Sections 608.3, 608.2.1.3, 608.2.2.3 and 608.2.3.2 at shower compartment; reinforcement shall be provided for the future installation of grab bars and seats complying with those requirements.

EXCEPTIONS:

1. In a room containing only a lavatory and a water closet, reinforcement is not required provided the room does not contain the only lavatory or water closet on the accessible level of the unit.
2. At water closets reinforcement for the side wall vertical grab bar component required by Section 604.5 is not required.
3. At water closets where wall space will not permit a grab bar complying with Section 604.5.2, reinforcement for a rear wall grab bar 24 inches (610 mm) minimum in length centered on the water closet shall be provided.
4. At water closets where a side is not available for a 42 inch (1065 mm) grab bar complying with Section 604.5.1, reinforcement for a sidewall grab bar, 24 inches (610 mm) minimum in length, located 12 inches (305 mm) maximum from the rear wall, shall be provided.
5. At water closets where a side wall is not available for a 42 inch (1065 mm) grab bar complying with Section 604.5.1 reinforcement for a swing-up- grab bar complying with Section 1004.11.1.1 shall be permitted.
6. At water closets where a side wall is not available for a 42 inch (1065 mm) grab bar complying with Section 604.5.1 reinforcement for a swing-up- grab bar complying with Section 1004.11.1.1 shall be permitted to be installed in lieu of reinforcement for rear wall and side wall grab bars.
7. In shower compartment larger than 36 inches (915 mm) in depth reinforcement for a shower seat is not required.

1004.11.1.1 Swing up Grab Bars. A clearance of 18 inches (455 mm) minimum from the centerline of the water closet to any side wall or obstruction shall be provided where reinforcement from swing up grab bar is provided. When the approach to the water closet is from the side, the 18 inches (455 mm) minimum shall be on the side opposite the direction of approach. Reinforcement shall accommodate a swing up grab bar centered 15 ¾ inches (400 mm) from the centerline of the water closet and 28 inches (710 mm) minimum in length, measured from the wall to the end of the horizontal portion of the grab bar. Reinforcement shall accommodate a swing up grab bar with height in the down position of 33 inches (840 mm) minimum and 36 inches (915 mm) maximum. Reinforcement shall be adequate to resist forces in accordance with Section 609.8.

EXCEPTION: Where a water closet is positioned with a wall to the rear and to one side, the centerline of the water closet shall be 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the sidewall.

1004.11.2 Clear Floor Space. Clear floor spaces required by Section 1004.11.3.1 (Option A) or 1004.11.3.2 (Option B) shall comply with Sections 1004.11.2 and 305.3.

1004.11.2.1 Doors. Doors shall not swing into the clear floor space or clearance for any fixture.

EXCEPTION: Where a clear floor space complying with Section 305.3, excluding knee and toe clearance under elements, is provided within the room beyond the arc of the door swing.

1004.11.2.2 Knee and Toe Clearance. Clear floor space at fixtures shall be permitted to include knee and toe clearances complying with Section 306.

1004.11.3 Toilet and Bathing Areas. Either all toilet and bathing areas provided shall comply with Section 1004.11.3.1 (Option A), or one toilet and bathing area shall comply with Section 1004.11.3.2 (Option B).

1004.11.3.1 Option A. Each Fixture shall comply with Section 1004.11.3.1.

EXCEPTIONS:

1. Where multiple lavatories are provided in a single toilet and bathing area such that travel between fixtures does not require travel through other parts of the unit, not more than one lavatory is required to comply with Section 1004.11.3.1.
2. A lavatory and a water closet in a room containing only a lavatory and water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

1004.11.3.1.1 Lavatory. A clear floor space complying with Section 305.3, positioned for a parallel approach, shall be provided at a lavatory. The clear floor space shall be centered on the lavatory.

EXCEPTION: A lavatory complying with Section 606 shall be permitted. Cabinetry shall be permitted under the lavatory provided the following criteria are met:

- a) The cabinetry can be removed without removal or replacement of the lavatory; and
- b) The floor finish extends under the cabinetry; and
- c) The walls behind and surrounding the cabinetry are finished.

1004.11.3.1.2 Water Closet. The water closet shall comply with Section 1004.11.3.1.2.

1004.11.3.1.2.1 Location. The centerline of the water closet shall be 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from one side of the required clearance.

1004.11.3.1.2.2 Clearance. Clearance around the water closet shall comply with Sections 1004.11.3.1.2.2.1 through 1004.11.3.1.2.2.3.

EXCEPTION: Clearance complying with Sections 1003.11.2.4.2 through 1003.11.2.4.4.

1004.11.3.1.2.2.1 Clearance Width. Clearance around the water closet shall be 48 inches (1220 mm) minimum in width, measured perpendicular from the side of the clearance that is 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the water closet centerline.

1004.11.3.1.2.2.2 Clearance Depth. Clearance around the water closet shall be 56 inches (1420 mm) minimum in depth, measured perpendicular from the rear wall.

1004.11.3.1.2.2.3 Increased Clearance Depth at Forward Approach. Where a forward approach is provided, the clearance shall be 66 inches (1675 mm) minimum in depth. Measured perpendicular from the rear wall.

1004.11.3.1.2.2.4 Clearance Overlap. A vanity or other obstruction 24 inches (610 mm) maximum in depth, measured perpendicular from the rear wall, shall be permitted to overlap the required clearance, provided the width of the remaining clearance at the water closet is 33 inches (840 mm) minimum.

1004.11.3.1.3 Bathing Fixtures. Where provided, a bathtub shall comply with Section 1004.11.3.1.3.1 or 1004.11.3.1.3.2 and a shower compartment shall comply with Section 1004.11.3.1.3.3.

1004.11.3.1.3.1 Parallel Approach Bathtubs. A clearance 60 inches (1525 mm) minimum in length and 30 inches (760 mm) minimum in width shall be provided in front of bathtubs with a parallel approach. Lavatories complying with Section 606 shall be permitted in the clearance. A lavatory complying with Section 1004.11.3.1.1 shall be permitted at one end of the bathtub if a clearance 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width is provided in front of the bathtub.

1004.11.3.1.3.2 Forward Approach Bathtubs. A clearance 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be provided in front of bathtubs with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one end of the bathtub.

1004.11.3.1.3.3 Shower Compartment. If a shower compartment is the only bathing facility, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the shower head wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall

be provided. Reinforcing for a shower seat is not required in shower compartments larger than 36 inches (915 mm) in width and 36 inches (915 mm) in depth.

1004.11.3.2 Option B. One of each type of fixture provided shall comply with Section 1004.11.3.2. The accessible fixtures shall be in a single toilet/bathing area, such that travel between fixtures does not require travel through other parts of the unit.

1004.11.3.2.1 Lavatory. Lavatories shall comply with Section 1004.11.3.1.1 and 1004.11.3.2.1.1.

1004.11.3.2.1.1 Height. The front of the lavatory shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.

1004.11.3.2.2 Water Closet. The water closet shall comply with Section 1004.11.3.1.2.

1004.11.3.2.3 Bathing Fixtures. The accessible bathing fixture shall be a bathtub complying with Section 1004.11.3.2.3.2.

1004.11.3.2.3.1 Bathtub. A clearance 48 inches (1220 mm) minimum in length measured perpendicular from the control end of the bathtub, and 30 inches (760 mm) minimum in width shall be provided in front of bathtubs.

1004.11.3.2.3.2 Shower Compartment. A shower compartment shall comply with Section 1004.11.3.1.3.3.

1004.12 Kitchens and kitchenettes. Kitchen and kitchenettes shall comply with Section 1004.11.3.1.3.3.

1004.12.1 Clearance. Clearance complying with Section 1004.12.1 shall be provided.

1004.12.1.1 Minimum Clearance. Clearance between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum.

1004.12.1.2 U-Shaped Kitchens. In kitchens with counters, appliances, or cabinets on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls, within kitchen work areas shall be 60 inches (1525 mm) minimum.

1004.12.2 Clear Floor Space. Clear floor space at appliances shall comply with Sections 1004.12.2 and 305.3.

1004.12.2.1 Sink. A clear floor space, positioned for a parallel approach to the sink, shall be provided. The clear floor space shall be centered on the sink bowl.

EXCEPTION: A sink with forward approach complying with Section 103.12.4.1.

1004.12.2.2 Dishwasher. A clear floor space, positioned for a parallel or forward approach to the dishwasher, shall be provided. The dishwasher door in the open position shall not obstruct the clear floor space for the dishwasher.

1004.12.2.3 Cooktop. Cooktops shall comply with Section 1004.12.2.3.

1004.12.2.3.1 Approach. A clear floor space, positioned for a parallel or forward approach to the cooktop, shall be provided.

1004.12.2.3.2 Forward approach. Where the clear floor space is positioned for a forward approach, knee and toe clearance complying with Section 306 shall be provided. The underside of the cooktop shall be insulated or otherwise configured to prevent burns, abrasions, or electrical shock.

1004.12.2.3.3 Parallel approach. Where the clear floor space is positioned for a parallel approach, the clear floor space shall be centered on the appliance.

1004.12.2.4 Oven. A clear floor space, positioned for a parallel or forward approach adjacent to the oven shall be provided. The oven door in the open position shall not obstruct the clear floor space for the oven.

1004.12.2.5 Refrigerator/Freezer. A clear floor space, positioned for a parallel approach to the refrigerator/freezer, shall be provided. The centerline of the clear floor space shall be offset 24 inches (610 mm) maximum from the centerline of the appliance.

1004.12.2.6 Trash Compactor. A clear floor space, positioned for a parallel or forward approach to the trash compactor, shall be provided.