

NORTH CAROLINA

**HOUSING
FINANCE
AGENCY**



Construction Field Guide For 2020 NCHFA-Financed Rental Properties

Foreword

The mission of the North Carolina Housing Finance Agency is to create housing opportunities for North Carolinians whose needs are not met by the market. One of our values is “stewardship”. In other words, our Agency emphasizes quality housing that improves the lives of people, and we promote long-term solutions.

Apartment communities are a major capital investment and we need to ensure that they are located thoughtfully and built well. If we all do our jobs properly, these developments will be a long-term asset that provides opportunities to a wide range of households.

I appreciate your interest in producing affordable housing and building it right. Working together, we can continue to build a better North Carolina and provide better homes for our fellow citizens.

*Scott Farmer
Executive Director*



Introduction

This Field Guide is intended to help architects, developers, and contractors to comply with the provisions of the North Carolina Qualified Allocation Plan and NCHFA Design Standards, and requirements of the N.C. State Accessibility Code, the Fair Housing Amendments Act, and Americans with Disabilities Act.

This guide also provides Agency mandatory building requirements related to multifamily construction. This document is not to be an all-inclusive resource, but rather to highlight areas that seem to cause the most questions and difficulties in the field.

Preparing Building Plans For Agency Approval

The Agency requires a complete set of construction drawings for an Agency building plan review on 24" x 36" paper only. PDF's emailed to the Agency will not constitute submission of plans and required building plan information. The plans must be reviewed and approved prior to construction start. If plan review issues are noted the Developer must submit responses to the Agency for approval. This may include new revised plans or plan sheets. Once the Owner's responses have been approved the Agency will notify the Owner that construction may begin.

The plan review set of drawings must be professionally bound in the following order and include:

- Building unit matrix showing unit types per residential building and floor level, location of Type A units with type of bathing fixture, and total number of units and unit types in the project.
- **Civil Plans:** Includes site plan, grading plan, erosion control plan with building finished floor elevations and spot topos around site and building foundations, utility plan (water and sewer), stormwater plan, site lighting plan, accessibility route plan, landscaping plan and site accessory plans that show drawings and details of entry monument sign(s), dumpster enclosure(s), mail kiosks(s), playground, tot lot, gazebo, picnic shelter, garden plots, arbors, garages and storage/maintenance buildings, etc.
- **Structural Plans**
- **Architectural Plans:** Must include all building elevations, roof plans, building floor plans showing units and common areas on each floor, unit layout of every unit type, cabinet elevations, window schedule, door and door hardware schedule, interior finish schedule, appliance schedule and typical through-wall details.
- **Plumbing Plans:** Includes plumbing fixture schedule, building and unit plans including water and sewer riser diagrams and water heater detail.
- **Mechanical Plans:** Must include air handler installation detail, clothes dryer venting with distance to exterior.
- **Electrical Plans:** Include typical house panel wiring detail.
- **Building/unit sprinkler plans**

Inspections

The Agency inspects all of the properties that it finances at least twice, one during the framing/rough-in phase and a final site visit at the completion of the project. The development team must inform the Agency about the current status of their projects and for scheduling the required inspections.

As part of the cost certification and closing process, project owners are required to submit a signed copy of the final NCHFA Site Observation Form stating that all items noted during the final inspection have been corrected. The Agency also requires as-built building plans be uploaded into the Agency's application system as part of the final cost certification. NCHFA will not close out a project until a final inspection has been completed and any necessary corrections have been made.

NCHFA Requirements for Senior Housing

- Emergency pull chain alarms in all bedrooms and all bathrooms. Must include strobe light and an audible alarm wired to exterior of apartment. Switches to be installed close to existing overhead light fixture switches.
- Loop handles on all cabinets and drawers.
- Single lever faucets in all kitchens and baths.
- Remote switches for all range hoods. One switch for light, one switch for fan.
- All lever-handle door hardware.
- Entry doors to have 1/2" max. thresholds.
- Minimum hall width is 42".
- Minimum door size is 36".
- Offset controls on all tubs and showers.
- Blocking for grab bars at all toilets and tub/shower units.
- Minimum 18" grab bar required opposite controls in all tubs/showers. Install vertically at 48" above finished floor and offset towards front.
- Handrails mounted at 34" to 38" above finished floor on both sides of all common area corridors.
- Second viewer at 48" on all entry doors.

Site and Parking

Site Issues

- All storm water from roofs and gutters must be piped away from buildings. Storm water from gutters may not run across sidewalks.
- All new construction properties must have lighted entry sign with brick or stone columns.
- No sidewalks may exceed a 2% cross slope regardless of location.
- Mailboxes require 60" clear floor space with locks centered on a 48" minimum parallel approach.
- Accessible sidewalks must allow for a 2 ½ foot vehicle overhang and still maintain a 48" clear path of travel. Parking bumpers may be used to prevent vehicle overhangs from blocking sidewalks.
- Sitework changes after application award are not permitted without Agency approval.

Designated Handicap Parking Spaces

- The slope of all handicap parking spaces and access aisles cannot exceed 2% in any direction.
- There must be at least one handicap parking space for every Type A unit and must be the closest space available to accessible route to building entrance(s). Minimum size is 8' x 18'.
- Handicap parking spaces and adjacent access aisles must be installed with concrete.
- Must have additional handicap parking spaces equal to 2% Type B unit designated parking spaces.
- There must be one van accessible parking space at site office locations for public accommodation.
- 1 of 6 handicap spaces, with a minimum of one, must be van accessible.
- All site amenities, including all dumpsters, must have either designated handicap parking spaces or be served by an accessible route.
- All property entrances must have a monument sign with brick or stone columns and lighting.
- When measuring slopes, the digital level must be set to measure percent (%) rather than degree.

Framing

- Blocking for grab bars must be installed at all toilets and tub/shower areas in both Type A and Type B units. Reference the 2009 A117.1 Accessibility Standards for guidance.
 - Blocking should be either 2x10 or 2x12 lumber with the bottom edge at 30" above floor.
 - Tub/shower units with built-in support for grab bars (OSB/plywood molded into unit) still require additional blocking in the wall framing.
- Laundry room closets must be 36" minimum depth measured from back wall to back of laundry room door in the closed position. Must have required clear floor space at each appliance.

Apartment Units

- All ceilings and walls in all bathrooms, laundry rooms, mechanical closets, exterior storage closets and wall behind kitchen sink base must utilize mold and water resistant drywall.
- All signage for apartments and in common areas must have raised characters and Braille.
- All clothes washer and dryer connection boxes must be installed directly behind appliance.
- The minimum width of interior hallways in residential units is 40”.
- All bedroom closets, interior storage rooms/coat closets and laundry rooms/closets must have a 4” tall by 8” wide minimum transfer grille above doors for air circulation.
- There must be a minimum of 3/4” air space under all interior doors for air circulation.
- All interior and exterior mechanical and storage closets must have finished floor coverings. All interior closets must have either carpet, sheet vinyl or VCT flooring. Exterior storage closets may have sealed/painted concrete floors. All closets must have drywall and baseboard painted.
- All under sink/vanity cabinet penetrations must be sealed.
- All non-carpeted flooring must have shoe molding installed.
- Baseboard and shoe molding must be installed behind all ranges and refrigerators.

Kitchens

- A pantry cabinet or closet (with 24” minimum door) in or near each kitchen must be provided in all apartments. Pantry must be 24” minimum in depth.
- Removable fronts are acceptable on accessible sink bases and work stations as long as the floor is finished underneath, the rear wall under the knee space is finished, and there are finished side panels on each side of the knee space. Removal of fronts must be done so with screwdriver only.
- Cabinets with removable fronts must be manufactured for that purpose. The Agency will not allow field altered cabinets. Cutting side panels, cabinet bottoms or backs and removal of plumbing and or electrical wires will not be allowed.
- Pull-out worktops are prohibited. Roll-under work stations must be installed beside ranges and in usable part of the kitchen and not against a sheetrocked wall.
- All apartment units must have a dishwasher.
- All accessible “Type A” units must have a side by side refrigerator or one with a bottom freezer drawer. The refrigerator doors must be able to open enough for storage bin removal.
- All residential units must have either a dry chemical fire extinguisher mounted and readily visible and accessible in every kitchen, or fire suppression canisters mounted under range hoods.
- All dishwashers and refrigerators must be Energy Star rated.
- In Type A units one lowered kitchen wall cabinet must be installed over the work station and with the top of bottom shelf at 48” maximum above the finished floor.
- In Type A units the kitchen sinks must be rear draining and have two compartments.
- Anti-tip devices must be installed under all kitchen ranges and be securely fastened to the floor.
- In Type A units the 60” clear floor space must be available throughout the entire kitchen.
- Walls behind and/or beside the range must be covered with a splash panel.
- Water/ice dispenser rough-in boxes must be installed with cold water supply line in the wall.
- Range hood exhaust ducts must have trim rings inside finished cabinets and be completely sealed.
- All dishwashers must be installed beside the kitchen sink.
- In Type A units kitchen ranges must be “drop-in” with cooktop no higher than 34” above floor.

Doors and Windows

- All exterior doors must be 36" and have composite or non-rotting brick molding. Type A unit exterior entry doors must have spring hinges.
- Single lever deadbolts are required on all exterior doors to all residential units.
- Insulated vinyl windows must be Model Energy Code compliant. Windows with 0.35 U-Factor and 0.30 SHGC compliant values or better are required for all new construction projects or when replacing windows in renovation projects.
- Windows must be installed per manufacturer's specifications, including the installation of silicone caulk behind nail fins and rubber window flashing around exterior side of nail fins.
- Bi-fold, by-pass, hollow core, pocket, and louvered doors are not allowed.
- All windows and mini-blinds in Type A units must have accessible pull-string hardware.

Sight and Hearing Impaired Units

Applies ONLY to projects receiving a Rental Production Program loan containing federal funds. The requirements of this provision can be satisfied by adding the elements described below to the additional Type A units required by QAP Section IV(F)(4) such that at least two percent (2%) of all units are properly equipped to serve persons with sight and hearing impairments. When figuring the 2%, partial units must be rounded up to a whole number.

- The units must be roughed in to allow for smoke alarms and strobe lights in every bedroom, every bathroom and living area.
- The units must have a receptacle next to the phone jacks in units for future installation of TTY devices.
- Each overhead light fixture and receptacle must be wired to accommodate a 150 watt load.
- For new construction the units must be constructed using all Type A fully accessibility codes.
- Lighted or contrasting color doorbell button connected to an audible and strobe alarm installed in each bathroom, bedroom and common area.

HVAC

- HVAC air handlers must be entirely enclosed (ducted) from return air grille to blower motor.
- Clothes dryer vent connections may not exceed 2" maximum AFF in laundry rooms.
- Dryer vents may not be installed on a side wall. They must be centered behind the clothes dryer.
- Total clothes dryer vent runs may not exceed 35 feet, including deductions for elbows.
- For new construction clothes dryer vent ducts may not be piped and vented to/onto roof or to/through the roof soffit. Dryer vent connection box must be galvanized metal.
- Exterior exhaust vents must be mechanically secured to siding and/or brick veneer and may not be terminated through the roof.
- Bath fans must be wired to the overhead light and must be vented to the exterior with metal duct.
- Range hoods, micro-hoods and bathroom exhaust fans must be vented to exterior with metal duct.
- Range hood exhaust ducts inside wall cabinet above must be sealed with metal trim rings. You may not seal them with foil or duct tape.
- Galvanized sheet metal ductwork is required. Duct board is not allowed.
- All interior common areas, hallways and enclosed corridors must have heating and cooling.

Plumbing/Bathrooms

- All full bathrooms must have recessed medicine cabinets and a full height mirror over all vanities.
- Controls in all tubs and showers in all units must be offset toward the front of the bathing unit.
- Vanity sizes in all units, excluding Type A units, must average 36" wide.
- In all Type A and Type B units the wood/OSB/plywood blocking for grab bars must be molded into the bathing fixture. They must also have flat back walls for grab bar installations per 2009 ANSI A117.1, Section 607 and 608. Solid wood blocking in walls behind bathing fixture is still required.
- For new construction projects all tub/shower bathing fixtures must be one-piece and have a minimum usable inside space of 30" wide and 58" long.
- All faucets, shower heads, and toilets must be EPA "Watersense" certified.
- All water heaters must be in an overflow pan that is piped to exterior and placed in closets to allow for their removal and inspection through a closet door. Pressure relief valves must also be piped to the exterior. Water heaters must have minimum nominal 40 gallon rating (50 nominal gallons for 3-bedrooms or larger).
- Hub/floor drains must be piped to the outside or piped to sanitary sewer with mandatory primed p-trap.
- Electric water heaters must have a Uniform Energy Factor of at least 0.92 or an Energy Factor of at least 0.95 efficiency and be a minimum of 40 gallons (50-gallon minimum for 3 bedroom and larger).
- Offset toilet flanges are prohibited for use under toilets.
- In all Type A units the grab bars must be installed in tub/showers per ANSI 607 and roll-in showers per ANSI 608. Toilets must be installed per ANSI 604.5.1 and 604.5.2 (36" grab bar behind toilet mandatory).
- In Type A units the roll-in showers and tub/showers must have permanently mounted seats and have shower head with wand on a sliding bar. Showers may have a maximum 1/2" curb with half of it being beveled. Curbless showers require a collapsible water dam installed prior to occupancy. All roll-in showers must have a 36" x 60" minimum clear inside "usable" floor space and have a shower rod and weighted shower curtain installed. There must be a diverter on the shower control that diverts water to a separate shower head that is mounted on the end wall opposite the fold down seat.
- All plumbing pipes must be installed inside wall cavities. Connections to water and sewer lines may not be made through floors or cabinet bottoms.
- Unit water shut-off valves must be located in a reachable location and be clearly marked with signage. If shutoff in mechanical closet and closet door locked, shutoff must be reachable from different location.

Electrical

- Walk-in closets (36" or deeper from wall to back of closet door) must have a switched overhead light.
- If using ceiling fans with light kits, the fan and light kit must have separate switches.
- In Type A and Type B units and common areas the switches to be no higher than 48" AFF.
- Remote switches for range hoods (one switch for fan, another for light) are required in all senior and Type A units. Switches must be at accessible locations and may not be installed under work stations.
- Overhead lighting, ceiling fans, telephone and cable jacks required in all bedrooms and living rooms.
- All full bathrooms must have an overhead ceiling light and also a vanity light centered over the sink. Exhaust fan must be wired to the overhead light fixture. Vanity lights must be on a separate switch.
- Electrical panels in Type A and Type B units must be mounted at 48" maximum AFF to top breaker.
- In all Type A units a hard-wired emergency pull station with visual/audible alarm is required in all bathrooms and all bedrooms, and must be installed close to ceiling light switches.
- All exterior storage closets must have a switched overhead light.
- Each building exterior must have a cable termination and demarcation box for cable vendor connection.

Required Site Amenities

All projects are required to include a minimum of six (6) project amenities. Three (3) of the amenities are mandatory and an additional three (3) can be selected from a list of approved options.

The required amenities vary by project type and are listed below.

Family Designated Housing	Senior Designated Housing
Playground with 4 stations minimum	Multi-Purpose Room (250 sq. ft.)
Covered Picnic Area (150 sq. ft. with 2 tables and grill)	Indoor or Outdoor Sitting Areas (Minimum of 3 locations)
Multi-purpose Room (250 sq. ft.)	Tenant Storage Areas

Besides the three required amenities above, three additional amenities must be selected from the list below.

- Covered drive-thru or drop-off at entry
- Covered patio with seating at 150 sq. ft. minimum
- Covered picnic area with 2 tables and one grille (150 sq. ft. min.) One table must be ADA approved
- Screened porch at 150 sq. ft. minimum and with seating
- Walking trails (4 ft. wide concrete or paved, continuous around property)
- Exercise room (must include new equipment)
- Resident computer center (minimum of two computers)
- Raised garden plots in senior projects only (50 sq. ft. per box, 24 inches deep, one plot per 10 residents)
- Gazebo (100 sq. ft. min.) with seating
- Sunroom with chairs (150 sq. ft. min.)
- Tot lot (family projects only) with four stations minimum
- High-speed Internet access (involves both a data connection in the living area of each unit that is separate from the cable/telephone connection and support from a project-wide network or a functional equivalent)
- Required tenant storage areas may not include square footage inside dwelling units. Room(s) inside common areas within buildings may be used to house tenant storage areas.

Building Ramps That Work

The minimum clear width of an accessible route is 48". This includes sidewalks and ramps. If ramps have handrails then handrails may not reduce the inside clear travel width below 48" and include edge protection.

An accessible route with a slope that is 5% (1:20) or less is considered a sidewalk. If the slope is between 5% (1:20) and 8.33% (1:12) the sidewalk becomes a ramp. No accessible route can exceed the 8.33% slope.

If the slope of the ramp is between 5% (1:20) and below 6.3% (1:16), the maximum horizontal run shall be 30 feet. If the slope is between 6.3% (1:16) and 8.33% (1:12), the maximum horizontal run shall be 20 feet.

Ramps shall have level 60" minimum landings at the top and bottom of each ramp and each ramp run. Where the ramp changes direction there must be a minimum 60" by 60" landing.

Handrails are required on both sides of any ramp.

Ramps are not allowed in interior corridors/hallways or in exterior breezeways/corridors. Primary building entrances may not be accessed by switchbacks or ramps from handicap parking.

Digital levels must be set to measure percent (%) rather than degree.

Accessibility

This Field Guide is based on the language in the North Carolina Accessibility Code and requirements of the 2009 ANSI A117.1 and 2009 ICC with North Carolina Amendments accessibility standards.

Unit Types

N.C. Code requires two different types of accessible units in multifamily development for new construction:

Type A Units:

These apartment units, often called “handicapped” units or “fully accessible” units, are somewhat different than a typical apartment. Type A units are required to have special features, including additional clear floor space in bathrooms and kitchens, wider doors, knee spaces at sinks, and workspaces beside ranges.

Type B Units:

These units, often called “adaptable” units or “Fair Housing” units, are very similar to a typical apartment yet with a few additional features to improve accessibility.

Number of Units

Type A Units:

N.C. Code (2009 IBC with NC Amendments, Section 1107) requires 5% of all units, and at least one of each “class” of unit, to be fully accessible. The “class” of unit is determined by the different bedroom types.

When calculating the number of **Type A** units required by the 5% rule, you must round up to the next whole unit.

Example: 5% of a 24-unit development is 1.2 units. To meet code requirements, the 1.2 must be rounded up, meaning the development would need at least 2 Type A units.

Example: A 24-unit development has 1-, 2-, and 3-bedroom apartments. While the 5% requirement only calls for 2 units, because of the different classes of units available, code requires the development to have at least 3 Type A units: one 1 BR, one 2 BR, and one 3 BR.

For new construction and adaptive re-use projects, NCHFA requires an additional 5% of units to be fully accessible Type A units with a roll-in shower. The easiest way to determine the number and type of units required is to double the number required by the state code with the 5% additional units containing roll-in type showers. See the Agency’s Qualified Allocation Plan, Section IV(F)(3) for reference.

Type B Units:

The N.C. Code does not require a certain number of Type B units. Instead, code requires all single story ground floor units in buildings with 4 or more units to follow the Type B guidelines. Also, in buildings with an elevator, every unit that is served by the elevator is considered a Type B unit. These units are also required under federal law and are described in HUD’s Fair Housing Act Design Manual.

Location of Type A Units

The fully accessible units must be distributed throughout a development to provide equal housing choice for all future residents. If a building is served by an elevator, then Type A units must be spread among all floors, including those with roll-in showers (required in the Agency’s Appendix B, Design Standards). As an example, if a residential building has three floors, then a Type A unit with tub/shower bathing fixture and a Type A unit with roll-in shower bathing fixture must be placed on each of the three residential floors. Type A units should not be those units located farthest from the elevator(s).

N. C. Accessibility Code and NCHFA Design Guidelines

	Type A Units	Type B Units	NCHFA Requirements
Entry Doors			
Hardware	Lever handles	Lever handles	Lever handles
Exterior Door Size	Min. 3/0		Min. 3/0
Exterior Thresholds	Max. ½" at all doors	Max. ½" at main entry	Max. ½" at all doors for senior designated units.
Security Viewer	2 nd viewer at 48"	No higher than 48"	2 nd viewer at 48" in all units of senior designated units.
Clear Floor Space	Min. 18" on pull side	Min. 18" on pull side	
Interior Doors			
Door Size	Min. 3/0	Min. 2/10	Min. 3/0 in senior units.
Hardware	All lever handles	No Requirement	All lever handles in senior units.
Clear Floor Space	18" on pull side	No Requirement	
Bathrooms			
Clear Floor Space	<ul style="list-style-type: none"> 60" clear turning circle in all usable areas. Clear floor space at door may not use knee and toe spaces. 30" x 48" space at all fixtures. 	<ul style="list-style-type: none"> 30" x 48" space inside room. Clear floor space at door may not use knee and toe spaces. 30" x 48" space at all fixtures. 	Clear floor spaces may not include areas under base and shoe moldings.
Grab Bars	Must be installed around tubs, showers and toilets. 36" grab bar behind toilet mandatory. 24" not allowed.	No Requirement	18" bar at 48" AFF and offset on end wall opposite controls required in tubs in all senior designated units
Lavatories			
Height (maximum)	34"	Option B Bathroom is 34" Option A Bathroom is 36"	
Knee Space (minimum)	30" wide x 27" high under sink. The 27" height must extend at least 8" minimum under sink.	When using a forward approach to vanity the 48" clear floor space may extend under the vanity top. Sink base must have a removable front.	Lavatory may have a removable front as long as the knee space, toe space, clear floor space and floor finishes are available and meet H/C code.
Controls	Lever handle required in all A and B units.		All units must have lever handle faucets.
Tub / Shower			
Usable dimensions	NCHFA requires a minimum of 36" x 60" in roll in showers and 30" x 58" in tub/showers		
Controls	Offset to front of fixture required for all fixtures in all apartments.		
Blocking for Grab Bars	Required at all tubs and showers in all A and B units.		Blocking must be molded into bathing fixtures.
Toilets			
Location	Toilet centered 16" to 18" from adjacent wall.	Toilet centered 18" from adjacent wall or tub/shower wall.	Type B units are federal Fair Housing Act units. (18")
Seat Height	15" to 19"	15" to 19"	
Blocking for Grab Bars	Required at all toilets and tub/showers in all A and B units.		Type A units, 36" grab bar behind toilet mandatory.

	Type A Units	Type B Units	NCHFA Requirements
Kitchens			
Clear Floor Space	<ul style="list-style-type: none"> 60" clear turning circle in all usable areas of kitchen 30" x 48" space at all fixtures T-turns not allowed. 	<ul style="list-style-type: none"> Min. 42" between cabinets Min. 60" in U-shaped kitchens 30" x 48" space at all fixtures 	Minimum 42" between cabinets in all units.
Cabinets	Loop hardware required	No Requirements	<ul style="list-style-type: none"> One lowered wall cabinet mounted over work stations in Type A units. Loop handles required for all cabinets in all "senior" designated units.
Range/Controls	<ul style="list-style-type: none"> Front controls required Range cooktop may not exceed 34" above floor. 	No Requirements	<ul style="list-style-type: none"> All anti-tip devices must be secured to the floor. Range fits flush to wall.
Remote Switches for Range Hood	Switches installed on wall behind work station.	No Requirements	Required in all "senior" designated units. Switches installed behind work station.
Dishwasher	<ul style="list-style-type: none"> Push button controls with café handle required Must be located beside sink 	Required and Energy Star rated.	Required in all units and be Energy Star rated.
Work Station	<ul style="list-style-type: none"> 34" max. height. Under counter knee space min. 30" wide and 27" high. May have removable front, yet the floor, sides and rear wall must be finished. 	No Requirement	<ul style="list-style-type: none"> Must be beside range in Type A units. Work station may have removable front. Pull-out work tops are not allowed. May not be installed next to sheetrocked wall.
Kitchen Sinks			
Height	34" Max.	36" Max.	All units must have double bowl kitchen sinks.
Knee Space	Min. 30" wide and 27" high. The 27" minimum height must be able to extend 8" minimum under sink.	No Requirement	<ul style="list-style-type: none"> Type A unit kitchen sinks must be rear draining. Sink base may have removable front, yet the floor, sides and rear wall to be finished.
Parking			
Handicap Parking and Access Aisles (must be installed with concrete)	<ul style="list-style-type: none"> Max. 2% in any direction Min. size is 8' wide by 18' deep 	<ul style="list-style-type: none"> Max. 2% in any direction Min. size is 8' wide by 18' deep 	1 in every 6 handicap parking spaces, or a minimum of one, must be van accessible.
Required Number of Handicapped Parking Spaces	<ul style="list-style-type: none"> One space for each H/C unit Required space must be the one closest to the unit. 	2% of the parking spaces serving Type B units	One van space required for office per ADA guidelines.
Decks and Patios			
Clear Floor Space	60" minimum clear floor space required.	No requirement	

New Construction Framing Inspection Checklist

Kitchens

- Make sure the handicap Type A kitchens have at least 9'3" wall-to-wall space to allow for 5' clear floor space.
- Make sure work station is beside range in Type A units. Work stations should not be installed beside a sheetrock wall.
- In Type B units, make sure the finished cabinet-to-cabinet distance in walking paths is at least 42".
- Make sure Type A units and all senior units get a dual remote wall switches to the range hood.
- Make sure the range receptacle is mounted in such a way as to allow the range to fit flush against the kitchen wall.

Bathrooms

- Door swings may not include knee and toe clearances in meeting the clear floor space requirements at doors.
- All Type A and Type B bathroom doors may not overlap into the 30" x 48" clear floor space.
- Make sure roll-in showers have a inside clear usable floor space of at least 36" x 60".
- Be sure shower or tub have a clear floor space of 30" x 60" at the approach.
- Make sure toilet and shower/tub grab bar blocking is available and covering 31" to 37" above finished floor.
- Make sure bathing fixtures are one-piece. Type A and Type B units must have blocking molded to the fixture.
- Be sure towel bars, toilet tissue, medicine cabinets, grab bars and wall hung sinks are blocked. In Type A units the rear grab bar behind toilet must be 36".
- Talk about shower curb height and approach.
- Make sure that roll-in shower drain is centered.
- In Type A units the permanently mounted seats in roll-in showers and tub/showers are mandatory. Shower controls must be within 27" reach range of seat.
- Make sure toilet is centered at 16" to 18" off adjacent wall. No tolerances accepted.
- All bathing units must have offset tub controls in all bathrooms.
- Make sure there will be 30" x 48" clear floor space at all bathroom fixtures in Type A and Type B units.
- All full bathrooms must have recessed medicine cabinets as well as full-width vanity mirrors. Type A units mount at 44" max. above finished floor.
- In Type A and Type B units the clear floor space must be centered on the bathroom lavatories.
- In Type A units the 60" clear floor space for turning circle must be in all usable areas of the bathrooms.

Common Areas

- Make sure hallways have 40" minimum width in family housing and 42" minimum width in senior housing.
- All Type A usable doors are 36" wide with 18" minimum clear floor space on pull side of door.
- All pantry doors must have a minimum width of 24". Pantry cabinets/closets must be 24" minimum in depth.
- Reach-in closets must not be deeper than 24".
- Thermostats must be at 48" maximum above finished floor. Reach ranges above this will not be allowed.
- Look for slab cracks.
- Check threshold heights.
- Type A entrance and secondary doors allow for ½" max threshold
- Type B entrance doors allow for ½" max. threshold. Rear sliding glass door threshold ¾" max. height.
- Type B patio doors may have up to 4" max. step if floor is slab, a 3/4" maximum if floor is wood decking.
- Check for required tempered window glass where required.
- Check for hallway handrail heights and blocking.
- Check to be sure laundry rooms are usable (36" minimum depth) and allow for the required clear floor space in all Type A and Type B units.
- Any senior building with more than one floor must contain a minimum of one elevator.

Site

- Check for grades at handicap units for slope issues.
- Make sure weep holes in brick veneers are at or below slab grade.
- Check for mold/mildew. Make sure materials are stored properly.
- Make sure lumber has grade stamps.
- All sill plates on concrete must be treated and sealed.
- Check for broken floor and roof trusses.
- Look at flashing to be sure it is installed properly.
- All Dumpsters must have an minimum 8' long concrete approach pad.

This checklist is not inclusive of all items inspected during the North Carolina Housing Finance Agency's visit. This report does not convey in any manner that the property inspected meets all federal, state, city or local building codes or regulations. If building code issues are mentioned, it is only suggesting to the property owner to investigate possible code violations and to correct the violations if existing. The North Carolina Housing Finance Agency accepts no liability in interpreting any building codes and/or regulations in this report.

Accessibility Codes To Consider

- In congregate buildings, 60% of building entrances must be made accessible.
- All apartment units must have raised characters and Braille signage at entry doors, mounted on latch side of door.
- Min. door clearances at the pull side of doors may not use knee/toe clearances.
- Main house panels in Type A and Type B units cannot be installed over 48" AFF to top breaker.
- Thermostats and telephone jacks cannot be over 48" in Type A and Type B units.
- Clear floor space is "on the floor". Clear floor space will not include base and shoe molding.
- Closets 48" or deeper must have the 60" clear floor space in Type A units.
- See ANSI Standards 604.5.1 and 604.5.2 for grab bar locations.
- In Type A kitchens the 60" min. clear floor space is mandatory. You can't use the T-turn option.
- For Type B bathroom sink heights, an Option A bathroom may have a 36" maximum sink height. For bathroom Option B the sink height is 34" maximum AFF.
- The clear floor space at lavatories must be centered on the bowl/faucet.
- Type A units must be disbursed among the various classes of units, meaning bedroom types.
- Laundry rooms require a 48" clear floor space for a parallel approach that is centered on the clothes washer and dryer. This will require additional space in front of/in the laundry room.
- In Type A kitchens the wall cabinets do not have to be mounted at 48" to the top of the lowest shelf. The Agency does require one wall cabinet, next to the range and over the work station, to be mounted at such height.
- Mailboxes for all units may not exceed 48" AFF to mailbox lock.
- Edge protection must be available along accessible routes per ANSI 405.9.
- Beware of protruding objects on accessible routes. They include fire extinguisher cabinets and wall hung light fixtures.
- Toilets in Type A units must be centered 16" to 18" from adjacent wall.
- Toilets in Type B units (they are also federal Fair Housing Act units) must be centered 18" from adjacent wall or tub/shower wall and 15" minimum from adjacent vanity/sink on opposite side.

Accessible Playgrounds

Playground surface conditions and materials must meet certain guidelines and standards which include:

- ASTM F1951 (Accessibility Surface Systems)
- ASTM F1292 (Impact Determination)
- ASTM F1487 (Consumer Safety Performance)
- ASTM F2017 (Engineered Wood Fiber)
- ASTM F2479 (Poured-In-Place Products)

The Agency requires a letter from the playground floor material provider stating the material meets or exceeds the above ASTM requirements.

The Agency requires a certificate from a third-party firm licensed to perform playground surface testing stating the installation of approved floor coverings was installed per manufacturer's requirements and that the finished floor surface meets the above ASTM standards.



New For 2020 Awards

Maintenance Rooms must have a minimum of 150 usable square feet. This excludes areas used by water heaters, electrical equipment or HVAC equipment.



No changes in sitework permitted after application award without Agency approval.



Switchbacks between handicap parking and building entrances are not allowed.



Agency requires concrete handicap parking spaces and adjacent access isles.



All senior designated buildings with more than one floor must have an elevator that serves all floors. All elevators must meet ADA requirements.



Water heaters in residential units must have nominal 40 gallons minimum (3-bedrooms and larger must have a nominal 50 gallons).



Ranges in Community kitchen and Type A handicap units must have a cooktop no higher than 34" AFF.



Cable demarcation boxes must be installed on each building to hold all unit "home runs".



Contact Information

North Carolina Housing Finance Agency

3508 Bush Street
Raleigh, NC 27609-7509
919-877-5700
www.nchfa.com

Russell Griffin

Senior Construction Specialist
919-877-5643
919-971-5008 (cell)
rsgriffin@nchfa.com

Toby Sutherland

Construction Specialist
919-877-5644
919-427-7306 (cell)
wtsutherland@nchfa.com

A SELF-SUPPORTING PUBLIC AGENCY



No tax dollars were used for this publication.

DISCLAIMER: Although this guidebook contains legal information and graphic depictions, it is intended only as a reference. Architects, contractors, developers, owners and others must refer to applicable rules, regulations and statutes. This guide is not intended to serve as a substitute for legal advice or to establish any lawyer-client relationship.