

# 2010 RESIDENTIAL BUILDER'S PRE-INSPECTION CHECKLIST

This checklist is designed as a general guide to assist residential builders in preparing for a fire inspection. This checklist contains many common inspection items, however it is not all-inclusive and does not contain all code requirements. Further, the code contains many exceptions and more detailed requirements than are described within this checklist.

Nothing contained within this document shall be interpreted as code, law, ordinance, or directive. Lincoln County Fire Protection District Ordinance 2009-1 and the 2009 International Residential Code should be referenced in any matter relating to code requirements.

For further information, questions, or concerns you may contact Barry Nuss, Fire Marshal at 636-528-8567.

## PERMIT & INSPECTION

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- Fire Permit is posted in the window and visible from the street.
- Building is clear of obstructions, waste, etc. that may obstruct views or access.

## GENERAL

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- Anti-tip device is installed on stove.
- Required fire hydrants are installed at appropriate height, steamer connection faces street.
- Required fire separation walls (2 or more dwellings) have one section opened for inspection.

## GLAZING

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Tempered or CPSC 16 CFR, Part 1201 compliant glass is installed in the following locations:

- Swinging and sliding doors and their assemblies, including sidelights.
- Enclosures for showers, bathtubs, hot tubs, etc. including glass in walls.
- Glass within 24" of either side of a door when closed and within 60" of the floor.
- Glazed area is > 9 sq. ft, < 18" above floor, > 36" above floor, within 36" of walking surface.
- Glass in railings and guards, regardless of height above walking surface.
- Glazing within 36" of stairways, landings, or ramps when within 60" of the walking surface.
- Glass within 60" of the bottom tread of a stairway in any direction and within 60" of the tread nose.

## GARAGE SEPARATION

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The following applies to a fire separation between garage and living space areas.

- Doors must be 20 minute labeled fire-rated or solid wood core not less than 1 3/4" thick.
- 1/2" Type X drywall separates the garage from the living space and attic area.
- 5/8" drywall separates garage from living area above the garage and structural supporting members.
- All ductwork in garage is covered with drywall and does not serve any garage area.
- Garage floor is non-combustible material and is sloped toward the vehicle entry doorway.

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## EMERGENCY ESCAPE & RESCUE OPENINGS

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Emergency escape and rescue openings are typically windows, but can be doors as well, but must exit directly to the exterior. Minimum requirements are 5.7 sq. ft. net clear opening, min. 24" high opening, min. 20" wide opening, and max. 44" sill height. 5.0 sq. ft. net clear opening is permitted for openings on grade.

- Every sleeping room has at least one emergency escape and rescue opening.
- The net clear opening requirements are obtained by normal operation from the inside.
- Operational from the inside without the use of keys or tools.
- Openings below the adjacent ground elevation are provided with a window well (add'l requirements)

## MEANS OF EGRESS

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- All hallways are not less than 36" wide.
- Main exit door is a side hinged door, min. 36" wide and 80" high, exiting directly to the exterior.
- Main exit door is readily openable from the inside without the use of keys, special knowledge, or effort.
- Stairways are not less than 36" wide above the handrail.
- Stairways are not less than 31.5" wide at and below the handrail, if only one is provided.
- Stairways are not less than 27" wide at and below the handrails, if two are provided.
- Handrails do not project more than 4.5" on either side of the stairway.
- Stairway headroom is a minimum of 6' 8" throughout.
- Minimum tread depth is 9", measured nose to nose.
- Maximum riser height is 8 1/4" measured top of tread to top of tread.
- Maximum 3/8" difference between any two treads or risers.
- Minimum 3/4" nosing on all treads, maximum 1 1/4".
- A landing is provided at the top and bottom of each stairway if the door swings over the stairs.
- Landings are min. 36" wide and 36" measured in the direction of travel.
- Handrails are provided on at least one side of a continuous run of stairs with 4 or more risers.
- Handrails are continuous from top to bottom of run (top riser to bottom riser).
- Handrails are 34" – 38" in height, measured from the top of the handrail to the tread nose plane.
- Handrails shall have a min. 1 1/2" between the wall and the handrail.
- Handrail ends are returned to the wall, terminated into a newel post or safety terminal.
- Circular handrails: Min. 1 1/4" diameter, max. 2" diameter.
- Handrails not circular: Max cross section dimension of 2 1/4" and must be graspable.
- Stairways are provided with illumination which illuminates the treads and landings.

## GUARDS

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- Guards on porches, balconies, raised floor areas, etc. more than 30" above floor or grade.
- Guards are min. 36" in height.
- Guards on open sides of stairs are a minimum of 34" in height.
- A 4" sphere cannot pass through guards, rails, balusters, etc.

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## SMOKE ALARMS

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- All smoke alarms are hardwired w/ battery back up and interconnected.
- Smoke alarms and installation are NFPA 72 compliant.
- At least one smoke alarm is located in:
  - Each sleeping room. (not on AFCI circuits)
  - In the immediate vicinity of each sleeping room.
  - On every story or level.
  - Enclosed mechanical rooms.
- Smoke alarms are a minimum of 36" from return air vents.
- Smoke alarms are located a minimum of 4" from any sidewall, regardless of angle.
- Coffered ceilings: Smoke alarms are installed on the highest portion of the ceiling.
- Vault ceilings: Smoke alarms are located within 12" – 36" of the peak.

## PREMISES IDENTIFICATION

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- Street address is permanently affixed to structure.
- Arabic or block numerals are a min. 4" high and ½" stroke width.
- Numbers are high contrast to the background and not shiny, reflective, or polished.
- Address is plainly visible from the street on which the building fronts.
- If building is set back more than 75' from the street, additional address is within 35' of street.
- Street address does not contain script or spelled out numbers.

## FIREBLOCKING

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- Concealed draft openings, concealed stud walls, partitions, furred walls, and parallel rows of studs are fireblocked at:
  - Vertically at floor and ceiling levels.
  - Horizontally at intervals not exceeding 10'.
- Fireblocking is complete at interconnections between vertical and horizontal concealed spaces. (Soffits, drop ceilings, cove ceilings, etc.)
- Between stair stringers at the top and bottom of the run.
- All openings around vents, pipes, ducts, and wires at ceiling and floor level with an approved material.
- Fireplace chimney or vent chases. (See Fireplace & Chimney section.)
- The integrity of all fireblocks are maintained and secured in place.

### APPROVED FIREBLOCKING MATERIALS:

1. 2" nominal lumber
2. ¾" plywood, particleboard, or OSB
3. ½" gypsum board
4. 28 gauge galvanized steel or tin

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5. UL listed fire caulk or other caulk approved by the Fire Code Official.

## DRAFTSTOPPING

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- Concealed floor/ceiling assemblies constructed of open web truss, perforated members or with a drop ceiling below is draftstopped every 1,000 sq. ft. using approved materials.

## FIREPLACES & CHIMNEYS

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### SOLID FUEL BURNING (PRE-MANUFACTURED)

- Fireplace chases are protected from the living space with min. 5/8" Type X drywall.  
 Chase drywall extends past the attic area to the roof sheathing. (Attic space separated from chase.)  
 Chase must be vertically fireblocked at each floor/ceiling level.  
 Minimum 2" clearance to combustibles is maintained from the chimney/flue.  
 Appropriate clearance is maintained from the firebox, per manufacturers specifications.  
 Fireplace and chimney are installed properly and per manufacturer specifications.  
 Manufacturers instructions and operating guide remain with the fireplace until final inspection.

### GAS FIRED APPLIANCES

- Chase must be vertically fireblocked at each floor/ceiling level.  
 Appropriate clearance is maintained from the firebox and flue/vent, per manufacturer's specifications.  
 Fireplace and chimney are installed properly and per manufacturer specifications.  
 Manufacturers instructions and operating guide remain with the fireplace until final inspection.  
 Gas shutoff, separate from the appliance, is located within 6' of the fireplace.

## CLOTHES DRYER EXHAUST DUCT

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- Exhaust duct is independent of other systems and terminates on the outside of the building.  
 Screens are not installed at the duct termination.  
 Ducts are not connected with metal screws or other fastening means which extend into the duct.  
 Joints run in the direction of air flow.  
 Maximum duct length is 25'. ( Reduce 2.5' for 45 degree angles and 5' for 90 degree angles.)

## RETURN AIR & PLENUMS

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- Return air vents not located in closets, bathrooms, toilet rooms, kitchen, garage, or mechanical rooms.  
 Return air ducts are isolated from other concealed spaces by approved fireblocking.  
 Return air ducts do not communicate between floors.  
 Material installed in return air ducts is non-combustible or "plenum rated".  
 Wiring passing through the duct perpendicular to the duct is fire caulked at each stud space.  
 Wiring does not run parallel or with the return air duct.

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## FUEL GAS

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- Appliances are not located in sleeping rooms, bathrooms, toilet rooms, storage closets.
- Other than black steel pipe, must have yellow labels with black "GAS" letters every 5 feet.
- Each appliance has a shutoff valve separate from the appliance and within 6'.
- Shutoff valves are not located in concealed spaces or return air ducts.
- Appliance vents are adequately supported.
- Horizontal exhaust vent runs are a minimum of 1/4" rise for every 1' of length.
- Appliances have safety covers installed.
- Water heaters have a pressure/temperature relief device and discharge which extends within 6" of floor.

## ELECTRICAL

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### ELECTRIC PANELS

- Electrical panel clearance: 30" width, 36" depth, 78" height.
- Piping, drains, etc. are not installed above panel.
- Illumination is provided in the area of the panel.
- No open knock outs; and penetrating wiring protected with grommets or other approved means.
- Each circuit is labeled to indicate purpose or use on the face or inside of the door.
- Panel is effectively grounded.

### WIRING METHODS

- Cable attached to the bottom of joists must be run through bored holes in the joist or on running boards.
- All cable is protected from physical damage.
- Floor boxes are specifically listed for the application.
- Receptacles are not installed within a bathtub or shower space.
- All splices and taps are contained within a junction box, receptacle box, or other approved method.
- All junction boxes, receptacles, switches, etc. are covered and protected with faceplates.

### GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTERS

- Receptacles are GFCI protected in the following locations:
  - Bathrooms
  - Garage and accessory buildings
  - Outdoors
  - Unfinished basements
  - Kitchen (receptacles on all countertop surfaces)
  - Laundry, Utility and Bar Sinks (receptacles serving the countertop surface within 6' of the outside sink edge.)
- AFCI protection is provided for all 15 & 20 amp outlets (includes all lighting) in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways

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and all similar rooms or areas. Listed "Combination" type AFCI's required to provide protection of the branch circuit.

- Smoke alarms are installed on AFCI circuits.

## **CLOTHES CLOSETS**

- Closets contain only surface mounted or recessed light fixtures with no exposed bulbs/lamps.
- A minimum of 12" is maintained between any light fixture and the nearest point of storage. (Fluorescent light fixtures must be a min. of 6" from the nearest point of storage.)