



## City of Norfolk Residential Plan Review Checklist

The following is a checklist of items that must be indicated on residential building plans. The references noted are taken from the USBC and IRC 2003. This is not a complete list. It is designed as a guideline, indicating information typically absent from plans submitted for plan review. It is not a substitute for, nor does it include, everything required for a complete set of building plans. Checking your set of plans against this list of commonly omitted items should help expedite the plan review process.

### I. General & Site Plan:

#### **IF CORRECTIONS TO PLANS ARE NECESSARY, 2 SETS OF PLANS REFLECTING THOSE CORRECTIONS ARE REQUIRED.**

- Check zoning for setbacks and other compliances before plan review.
- For additions and some alterations, submit two copies of the site plan that show the addition and setbacks.
- A finished floor elevation is required for new construction or substantial improvements.
- If the property is in the Chesapeake Bay Preservation Area, a review by the Division of Environmental Services within our Department is required.
- Plans shall be drawn to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and shall show in detail that it will conform to the provisions of the code as specified in section 112.3 USBC.
- Plans must be signed by the individual responsible for the design, including his/her occupation, address and phone number per Title 54 of the code of Virginia.
- Ensure that the proposed site plan and building footprint plan are consistent.

### II. Architectural:

- Identify each room or space for its intended use or occupancy.
- Glazing in hazardous locations as specified in section R308.4 shall be safety-typed according to the requirements of CPSC 16-CFR, Part 1201.
- Note that all glass bathtub enclosures shall be tempered. This includes windows in showers. Section R308.4.
- Openings between a garage and residence shall be equipped with either solid wood doors not less than 1- $\frac{3}{8}$ " in thickness, or 20-minute fire-rated doors.
- Show a minimum of  $\frac{1}{2}$ " gypsum board applied to the garage side to separate the garage from the residence and its attic. This is required for separation, per section 309.
  - ❖ Where a floor-ceiling assembly is separating a habitable space from the garage, a minimum of  $\frac{5}{8}$ " type-X gypsum is required, as per USBC.
- Show that each sleeping area has:
  - ❖ one window that can be opened or an exterior door approved for emergency egress or rescue (Section R310).
  - ❖ Egress windows must have:
    - 20" width minimum net clear opening
    - 24" height minimum net clear opening
    - net clear opening of 5.7 square feet
    - 5.0 at grade level
    - 44" max sill height

*Note: Meeting the minimum width or height will require the other dimension to be larger to meet the required 5.7 square feet (Section R310).*

- Show bathroom exhaust fans are vented to the outside, or provide the minimum required open-able windows (Section 303.3).
- Show the minimum clear width of hallways and stairs to be not less than 36" (Section R311.3 & 311.5.1).
- Provide a stair section showing a maximum riser height of 8-1/4" and a minimum tread length of 9". Show minimum headroom in all parts of the stairway of not less than 6'-8" measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform (Section 311.5) USBC.
- Indicate handrails within the minimum and maximum heights of 34" and 38" measured vertically from the nosing of the treads on at least one side of stairways of three or more risers. (section R311.5) USBC.
- Indicate guardrails on porches, balconies or raised floor surfaces located more than 30" above the floor or grade below. Show guardrails not less than 36" in height, and a spacing between the pickets or balusters less than 4". Section R312
- Show location of Smoke Detectors (Section R313):
  - ❖ One in each sleeping area
  - ❖ Immediately outside of sleeping area
  - ❖ On each story of dwelling
  - ❖ Indicate all detectors are interconnected
  - ❖ Specify that alarms will receive primary power from the building wiring and have a battery backup
- Indicate minimum insulation values as follows: R-19 in crawl space floor, R-13 in exterior walls and R-30 in attic (N 1102.1).
- Show location and size of attic access. Minimum required is 22"x30" (Section R807.1).
- Indicate pitch of roof.
- Indicate required attic ventilation – 1/150 of roof area. See exceptions. (Section R806).

### III. Footing and Foundations:

- Show that shear wall panels are at every corner and at 25' intervals (Section R602.10).
- Indicate the depth to the bottom of the footing below grade (12" min. req.)  
Section R403.1.4
- Indicate size of footing (width and thickness) in accordance with Table R403.1.
- Specify assumed soil bearing value (R401.2).
- Indicate the compressive strength of all concrete in accordance with Table 402.2 for a moderate area.
- If in flood zone, indicate flood vents as required by R323.2.2.
- Brick skirt and 4" CMU must be tied together with ladder type reinforcing ties and then grouted together (per Section R606.2.1).
- Indicate the footing size of pier footings (width, length, depth, thickness).
- Show the unsupported height of masonry piers. Note: The unsupported shall not exceed 10 times their least dimension..., except that unfilled hollow piers may be used if their unsupported height is not more than four times their least dimension. Hollow piers shall be capped with 4 inches of solid masonry or concrete (Section R606.5).

#### A. Slab Construction

- ❖ Show perimeter insulation 1" thick extending minimum 24" from foundation block and under the slab (N 1102.1).
- ❖ Indicate type of vapor barrier under concrete (Section R506.2.3).
- ❖ Indicate thickened slab at load bearing walls - equivalent to that required for footings (Section R403.1.1).

## B. Crawl Space Construction

- ❖ Show the location, size and number of foundation vents. Section R408
- ❖ Show location and minimum 18"x24" access panel. Section R408.3
- ❖ Indicate the clearance from the crawl space grade to the underside of the girders and floor joists. Note: Indicate protection against decay when girders are located closer than 12" to exposed ground and wood joists or the bottom of wood structural floor when closer than 18" as indicated in Section 319.1.

## IV. Framing

- Indicate anchorage details for wood framing. If anchor bolts are used, specify minimum ½" diameter anchor bolts at 6' O.C. and embedded a minimum of 7" into grouted masonry or concrete. If foundation straps are used, specify manufacturer, type, size and maximum spacing of 6' O.C. (Section R403.1.6).
- Floor and wall framing shall be capable of accommodating all loads imposed according to the code, and transmitting the resulting loads to the supporting elements down to the foundation (Section R501.2, 601.2 & 802.11).
- Specify species and grade of lumber to be used (Section 602.1 & 802.1).
- Specify header size and span for all headers as per Sections 502.5(1) & 502.5(2).
- Provide **specific** manufacturer span/load data sheets for **all** engineered wood products such as roof trusses, open-web trusses or truss-joists, micro-lam beams, para-lams, glu-lams, etc...

**NOTE:** *Manufacturer design guideline "cut sheets" **ARE NOT** acceptable. These are design guidelines only, and are not certified by the manufacturer or designed by an engineer that they are designed for your specific application.*

- Plans must indicate the size, spacing and direction of span of all structural elements: girders, floor joists, ceiling joists and rafters. Show and/or specify column anchorage details from beams down to the foundation.
- Indicate all lateral design details. If lapping structural sheathing across floor system, indicate the panel edge breaks. If using strapping, indicate the size, length, and spacing. Show hurricane clips on each end of all roof rafters to wall frame.
- Specify the type, grade and thickness of all structural woods panels used for wall and roof sheathing, and all sub-floor panels. These must comply with Table R503.2.1.1(1).
- Attic access must be 22" by 30" where roof is at least 30" above ceiling or where equipment is in attic (Section R807).

## V. Decks & Porches

- Provide footing and framing details of all decks.
  - ❖ Deck plan view should show the location of all posts (dimension space between) the size of girder across the posts, the size, spacing and span of joists.
  - ❖ Section view should show:
    - the depth and size of footing
    - post to footing anchorage
    - beam to post anchorage
    - deck joists
    - decking
    - height of deck above adjacent grade
    - height of guardrail and spacing of pickets as defined above
    - stair section from deck to grade