Garrett County Planning and Land Development
Permits and Inspections Division
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Residential Plan Review Checklist
2015 IRC
(Revised 8/2015)

NOTE: STUDY THIS CAREFULLY. FAILURE TO COMPLY WITH THE BUILDING CODE WILL RESULT IN A NOTICE OF VIOLATION. THE FOLLOWING EXCERPTS DO NOT ENCOMPASS THE ENTIRE BUILDING CODE OF GARRETT COUNTY, BUT ARE PROVIDED ONLY AS A SYNOPSIS OF CODE FUNDAMENTALS FOR THE CONSTRUCTION OF A SINGLE FAMILY DWELLING. ***RELEASED PLANS MUST BE MAINTAINED AT PROJECT SITE.***

Code Section	Comment Number	Synopsis from Code	
Footing R-403	1. _____	a. Footing shall bear on undisturbed soil and below frost line (minimum 36 inches finish grade to bottom)	R-
	_____	b. Minimum continuous footing size is:	Depth: 8 inches Width: of foundation wall + 4 inches each side
	_____	c. Minimum chimney footing size is:	Depth: 12 inches Width: W & L Masonry + 6 inches all sides
	_____	d. Minimum column or pier footing size (for normal residential loading and average assumed soil bearing capacity) unless otherwise determined by calculation is 18 x 18 x 10 inches thick, one story; and 24 x 24 x 12 inches two story.	
	_____	e. Steps in elevation should provide a 6 inches vertical overlap.	
	_____	f. Form boards must be removed before backfill.	
Foundation R-404	2. _____	Foundation Wall check	
		a. New foundation shear wall and prescriptive designs in 2015 IRC.	
		b. See masonry and concrete tables in 2015 IRC or check with office.	
Damp-Proofing R-406	3. _____	a. Exterior foundation walls of concrete: bituminous coating footing to finish grade.	

_____ b. Exterior foundation walls of masonry: Portland cement parging (coved) at footing to finish grade + bituminous coating, footing to finish grade.

_____ c. Hot tar sprayed under pressure.

Foundation Drainage R-405.1

4. _____ a. Sub soil drains shall be provided around perimeter of all foundations.

_____ b. Below level of floor.

_____ c. Gravel must extend min 12 inches beyond edge of footing, 6 inches on top, covered with approved filter membrane material.

_____ d. Discharge to gravity outfall. Where not possible to convey drainage by gravity outfall, discharge to sump pit with pump.

_____ e. Drains in window wells.

Conc. Floor Slab R-506

5. _____ a. Interior concrete floor slabs: (minimum 3.5 inches thick)

_____ b. Prepare sub grade: compacted, no vegetation, + maximum fill depth 24 inches with clean sand and gravel, 8 inches for earth.

_____ c. If fill beneath a concrete floor slab exceeds 8 inches of earth or 24 inches of gravel, the fill must be compacted mechanically with the compaction verified by a certified test, or:

_____ d. The slab may be designed to be self-supporting and certified by a registered architect or engineer.

_____ e. Minimum 4 inches thick gravel, sand or equal base under slab.

_____ f. Vapor barrier: lap joints 6 inches plus.

_____ g. Control joints and reinforcing recommended.

_____ h. Slabs less than 12 inches below grade need to be insulated: R-10 ; or R15 if heated from top of slab down 24 inches or from top of slab and in 24 inches.

Crawl Space R-407, R-408

6. _____ a. Minimum height 18 inches to joists, 12 inches to beams.

_____ b. Minimum 18 x 24 inches access panel through floor, 16 x 24 inches through exterior wall.

_____ c. Minimum 1/150 under floor area in vents – or 1/1500 under floor area with a vapor barrier. One vent within 3 feet of each corner.

Decay & Termite Protection R-317, R-318

7. _____ a. Use approved or treated woods – a plastic or metal termite shield, chemical soil treatment, etc.

_____ b. Sill: 6 inches clear to earth, minimum.

_____ c. Siding: 6 inches clear to earth, minimum.

_____ d. Wood on a concrete slab which is in direct contact with earth shall be of treated or approved materials.

_____ e. Beams pocketed in exterior masonry or concrete walls shall have ½ inch clear on top, sides, ends and rest on a vapor barrier.

Masonry Veneer
R-703.2

8. _____ a. Weather resistant membrane (15 lb. felt) or other approved weather resistant material is required to cover all exposed wood and 6 inch strips to cover open joints of otherwise approved sheathing material that will be covered w/a masonry veneer.

_____ b. Attach to wood frame with approved ties at 24 inches on center horizontally and shall support not more than 3-1/4 square feet of wall area with 1 inch air space.

Anchorage
R-403.1.6

9. _____ a. ½ inch diameter anchor bolts 7 inches into masonry or concrete walls at maximum 6 feet on center required. Maximum 12 inches from plate ends and a maximum of 12 inches from each corner.. (Approved straps acceptable when installed per manufacturer installation instructions.)

Fireplaces
Chimneys Chapter
R-1001

Fireplace Clearances:

10. _____ a. If fireplace opening is less than 6 square feet, minimum hearth protection is 16 inches front, 8 inches each side; if 6 square feet or more, 20 inches front, 12 inches each side.

_____ b. Interior chimneys: minimum 2 inch clearance to combustible: exterior minimum 1 inch.

_____ c. Chimneys shall extend at least 3 feet above the highest point where they pass the roof of a building and at least 2 feet higher than any portion of building within 10 feet.

_____ d. Wood or coal burning stoves shall be tested and listed by a nationally recognized laboratory and installed in accordance with listing requirements.

_____ e. Outside combustion air 6 square inches – 4 inch pipe.

_____ f. Rain cap on masonry flues. (see section R-1003)

Insulation
R-302.10.1

11._____ a. Roof/ceiling R49.

_____ b. Walls:

1. 2x6 exterior wall R20 minimum.
2. 2x4 exterior wall R5 continuous foam board insulation across exterior face of studs and R13 in stud pockets.
3. Masonry exterior walls 50% above grade – R17, 50% below grade R-15 continuous or R-19 in stud wall.

_____c. Conditioned, insulated crawl spaces are allowed – check with office for requirements.

_____d. Insulation to meet requirements of 2012 IECC.

Slab on Grade
Floors R-403.3 12._____a. The perimeter of "slab on grade" floors and daylight edge of basement slabs of finished habitable space shall be insulated with a rigid material extending downward from the top of the slab a minimum distance of 24 inches or horizontally beneath the slab for a minimum total distance of 24 inches having a minimum value of R-10. Use R-15 for heated slabs.

Identification
R-502.1

13. _____a. All load-bearing lumber, plywood and particleboard shall conform to applicable standards or grading rules and shall be so identified by the grade mark..

_____b. "Structural sawmill" lumber shall be graded and stamped or documentation provided.

Exits
R-311.1 14. _____a. At least one side hinged door, usually front (3 feet wide x 6 feet 8 inches height
R-310 minimum).

_____b. Minimum hall width is 3 feet.

_____c. Every sleeping room shall have:

1. An exterior door, or openable window approved for emergency egress.
   A. Exit window:
   - Net clear opening of 5.7 square feet (5.0 square feet. if a grade floor window – within 44 inches of grade)
   - Min. net clear opening height of 24 inches
   - Min net clear opening width of 20 inches
   - Max. sill height of 44 inches
   - Check 2012 IRC for window well regulations
2. An egress window or door is required in habitable attics – see 2012 IRC for definition for habitable attic.

Stairs and
Railings
R-311.7 15. _____ a. Minimum stair width is 3 feet.

_____ b. Minimum headroom is 6 feet 8 inches measured vertically from sloped plane connecting nosings and floor or landing.

_____ c. Minimum tread is 9 inches + ¾ inch to 1¼ inch nosing.

_____ d. Maximum riser is 8 ¼ inches.

_____ e. Handrail: Type 1 handrail is round, oval or square 2 inches wide maximum, 1 ¼ inc inch minimum, 6 ¼ inch perimeter maximum. If not round: 2 ¼ inch maximum cross section Type 2 handrail has a perimeter greater than 6 ¼ inch and must have a finger groove on both sides of the profile: 2 ¾ inch maximum width, 1 ¼ inch minimum. See code book for finger recess specs.

1. One continuous handrail required, between 34 – 38 inches above nosing.

_____ f. Guardrail: Open side(s) of stair shall have a guardrail not less than 34 inches in height, measured above tread nosings. Intermediate rails, balusters or ornamental closures shall be installed so as to not allow passage of an object 4 inches or more in diameter.

_____ g. Porches, balconies, decks and other raised surfaces located more than 30 inches above the floor or grade below, shall have guardrails not less than 36 inches high with no openings larger than 4 inches.

_____h. Steps with 4 or more risers require a handrail.

Landings
R-311.7

16. _____ a. A minimum 3 x 3 foot landing shall be required on each side of an egress door.

_____ b. Landings at door 1 ½ inch below threshold for required egress door. A 7 ¾ inch step down to a minimum sized 3 x 3 foot landing is allowed.

Ceiling Heights
R-305 and Room Size
R-304.1

17. _____ a. Every habitable room shall have a ceiling height of 7 feet in at least 50% of its required area with no portion of required area less than 5 feet. All other rooms shall have a ceiling height of not less than 7 feet
EXCEPTIONS: 1) Beams spaced not less than 4 feet on center may project not more than 6 inches. 2) Ceiling heights in parts of basements not considered habitable such as laundry rooms or bathrooms may not be less than 6 feet 8 inches clear except for under beams, girders, ducts or other obstructions where the clear height shall be minimum 6 feet 4 inches.

_____ b. Required areas per dwelling: one habitable room = 120 square feet minimum. other habitable rooms = 70 square feet minimum (Not less than 7 feet in any horizontal dimension) kitchens are exempt from minimum square footage requirements.

_____ c. Bathrooms minimum height of 6 feet 8 inches over fixtures.

Light and Ventilation
R-303.1
806.1

18. _____ a. All habitable rooms shall be provided with a total glazing area of not less than 8% of the floor area. 4% of glazing area must be openable.
EXCEPTION: The glazed areas need not be openable where an approved whole house mechanical ventilation system is provided and the opening is not required by R-310 (Exits). (Submit verification of system design).

_____ b. Bathrooms (similar to above): 3 square feet glazed, ½ openable.
EXCEPTION: Not required if artificial light and mechanical exhaust system that complies with M1507. Vent must discharge out-of-doors.

_____ c. Enclosed attics and roof spaces shall have cross ventilation not less than 1/150 of the area. The ventilation area may be 1/300 provided at least 50% of the area is equipped with ventilators located no more than 3 feet below the roof peak or at the peak and the balance with eave or cornice vents.

_____ d. Dwellings that have a blower door tested air filtration rate of less than 5 air changes per hour must be provided with a whole house mechanical ventilation system in accordance with M1507.3

Fixture Clearance
(MD State Plumbing Code 806)

19. _____ a. Each water closet shall have minimum 15 inches clear each side of center line and 21 inches to front.

_____ b. Clearance at shower stall: 24 inches in front of opening with a 30 inch wide area provided.

_____ c. Headroom over fixtures shall be 6 feet 8 inches

_____ d. 21 inches between front of toilet and tub.

Attic Access
R-807.1 20. _____ A readily accessible opening not less than 22 x 30 inches shall be provided to all attic areas with a clear height over 30 inches. Closets (other than walk-in) are not considered readily accessible.

Smoke Detector
MD State Fire Prevention Code 21. _____ Smoke detectors shall be installed on each level of structure and in each bedroom and outside of bedroom in hallways.
- wired to a lighting circuit (not separate)
- all required smoke detectors must be interconnected with battery backup.
- Carbon Monoxide detectors are required.

Garage Separation 309 (Local Ordinance) Garages shall be completely separated from dwelling by:

22. _____ a. Attached to dwelling: 5/8 inch fire-rated gypsum board on garage side of all common walls to dwelling and either: (A) extending up same wall tight to underside of roof sheathing (through attic ventilation required for each attic area) – or – (B) extending across entire ceiling of garage (access hole not recommended – if desired, ask for details). Self-closing doors into dwelling – solid core wood or 20 minute rated wood or metal, and 4 inch step up into dwelling.

_____ b. Under dwelling: walls, partitions, floors and ceilings separating the garage from the adjacent interior spaces shall be covered with not less than 5/8 inch drywall. Doors into a dwelling shall self closing and have a rating of 20 minutes and min. 4 inch step up into dwelling or basement

Flashing 23. _____ Flashing required where decks attach to house, step flashing of chimneys and dormers and gables required. Drip caps are required over projecting horizontal exterior trim.

Fire blocking 24._____ Fire blocking- check code book or call office.

Automatic Fire Sprinkler System
R-313.2

25._____ An automatic residential fire sprinkler system shall be installed in new one and two family dwellings.
Not required for additions or alterations.