

Foundation Wall Construction	Normal Thickness ³ (inches)	Maximum Depth of Unbalanced fill ¹ (feet)
Masonry of Hollow Units, UngROUTed	8	4
	10	5
	12	6
Masonry of Solid Units	6	3
	8	5
	10	6
Masonry of Hollow or Solid Units, Fully Grouted	8	7
	10	8
	12	8
Plain Concrete	6 ⁴	6
	8	7
	10	8
	12	8
Rubble Stone Masonry	16	8
Masonry of hollow units reinforced vertically with No. 4 bars and grout at 24 inches on center. Bars located not less than 4-1/2 inches from pressure side of wall. Grout to go from bottom to top of wall regardless of height of backfill- don't stop at grade.	8	7

For SI: 1 inch = 25.4 mm. 1 foot = 304.8mm

¹ Unbalanced fill is the difference in height of the exterior and interior finish ground levels. Where an interior concrete slab is provided, the unbalanced fill shall be measured from the exterior finish ground level to the top of the interior concrete slab.

² The height between lateral supports shall not exceed 8 feet.

³ The actual thickness shall not be more than 1/2 inch less than the required nominal thickness specified in the table.

⁴ Six-inch plain concrete walls shall be formed on both sides.

Damp-
Proofing
406

3. _____ a. Exterior foundation walls of concrete; bituminous coating footing to finish grade.
 _____ b. Exterior foundation walls of masonry; portland cement parging (covered) at footing to finish grade + bituminous coating, footing to finish grade.
 _____ c. Hot tar sprayed under pressure.

Foundation
Drainage
405.1

4. _____ a. Sub soil drains shall be provided around perimeter of all foundations.
 _____ b. Below level of floor.
 _____ c. Ground must extend min 12" beyond edge of footing, 6' on top, covered w/approved filter membrane material.

- _____ d. Discharge to gravity outfall. Where not possible to convey drainage by gravity outfall, discharge to sump pit with pump.
- Conc. Floor Slab 506
5. _____ a. Interior concrete floor slabs: (min. 4" thick)
 _____ b. Prepare sub grade: compacted, no vegetation, + max. fill depth 24" from clean sand and gravel, 8" for earth.
 _____ c. If fill beneath a concrete floor slab exceeds 8 in. of earth or 24 in. 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. Min. 4" thick base course: gravel, sand or equal
 _____ f. Vapor barrier: lap joints 6" +
 _____ g. Control joints: no expanse to exceed 30 l.f., and at offsets greater than 10' – or – 6" X 6" 10 gauge welded wire mesh at mid-depth of slab.
- Crawl Space 408
6. _____ a. Joists-18" clear, beams – 12" clear to earth, min.
 _____ b. Min. 18" X 24" access panel through floor, 16 X 24 through exterior wall.
 _____ c. Min. 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 323, 324
7. _____ a. Use approved or treated woods – a plastic or metal termite shield, chemical soil treatment, etc. see section 323.1
 _____ b. Sill: 6" clear to earth, min.
 _____ c. Siding: 6" clear to earth. Min
 _____ d. No wood on concrete slabs, 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 1/2" clear on top, sides, ends and rest on a vapor barrier.
- Masonry Veneer 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" strips to cover open joints of otherwise approved sheathing material that will be covered w/a masonry veneer.
 _____ b. Attach to wood frame w/approved ties @ 24" o.c. horizontally and shall support not more than 3-1/4 sq. ft. of wall area with 1" air space.
- Anchorage 403.1.6
9. _____ a. 1/2 in. diameter anchor bolts 7 in. into masonry or concrete walls @ max. 6 ft. on center required. Maximum 12 in. from plate ends and a max of 12 in. from each corner. (Approved straps acceptable when installed per mfr. installation instructions.)
- Fireplaces Chimneys Chapter 1003
- Fireplace Clearances
10. _____ a. If fireplace opening is less than 6 sq. ft., min. hearth protection is 16" front, 8" each side; if 6 sq. ft. or more, 20" front, 12" each side.
 _____ b. Interior chimneys: min. 2" clearance to combustible: exterior min. 1".
 _____ c. Chimneys shall extend at least 3' above the highest point where they pass the roof of a building and at least 2' higher than any portion of building within 10'.
 _____ d. Wood or coal burning stoves shall be tested and listed by a nationally recognized laboratory and installed in accordance with listing requirements. Note: In a new construction, stove must be installed prior to final inspection – or – a separate permit/inspection is required.
 _____ e. Outside combustion air 6 sq" – 3" pipe.
- Insulation R-320
11. _____ a. Roof/ceiling assemblies shall have a minimum value of R-38.

- _____ b. Exterior walls above grade, including foundation walls shall have a minimum value of R-18
- _____ c. Floors over unheated spaces and stairwells shall have a minimum value of R-21.
- _____ d. Combustible facings on “fiberglass” insulation material may not be installed so as to remain exposed to occupiable spaces.
- _____ e. Crawlspace walls R-20
- _____ f. Basement walls R-10

Slab on Grade
Floors 403.3

12. _____ a. The perimeter of “slab on grade” floors of finished habitable space shall be insulated with a rigid material extending downward from the top of the slab a minimum distance of 48 in. or downward and beneath the slab for a minimum total distance of 24 inc. having a minimum value of R-9.

Identification
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. See local ordinance for the use of “structural sawmill” lumber.

Exits
R-311.1

14. _____ a. At least one door (usually front 3’ w. x 6’-8” h. min.)
_____ b. Min. hall width is 3’.

R-310

- _____ c. Every sleeping room shall have:
1. An exterior door, or openable window approved for emergency egress.
 2. An exit window:
 - Net clear opening of 5.7 sq. ft. (5.0 sq. ft. if a grade floor window)
 - Min. net clear opening height of 24”
 - Min net clear opening width of 20”
 - Max. sill height of 44”
 - See 2000 IRC for window wells

Stairs and
Railings
R-314, R315

15. _____ a. Min. width is 3’ (See exceptions, County Ordinance)
_____ b. Min. headroom is 6’-8 measured vertically from sloped plane connecting nosings and floor or landing.
_____ c. Min. tread is 9” + 1” nosing if closed risers, ¾ nosing making a 9 ¾” tread, max 1 ¼ “.
_____ d. Max. riser is 8-1/4”
_____ e. Handrail: Grasable, 2 –2 ¼” max. cross-section, 1 ¼” min. See handrail section for finger groove info.
 1. One continuous, min. (right side descending recommended).
 2. Between 32” – 38” above nosing
- _____ f. Guardrail: Open side(s) of stair shall have a guardrail not less than 36” in height, measured above tread nosings. Intermediate rails or ornamental closures shall be installed so as to not allow passage of an object 4” or more in diameter.
- _____ g. Porches, balconies, decks and other raised surfaces located more than 30” above the floor or grade below, shall have guardrails not less than 36” high subdivided per (f) above.
- _____ h. Steps with 4 or more risers require a handrail.

Landings
R-312

16. _____ a. A min 3’ by 3’ landing shall be required on each side of an egress door.
EXCEPTION: The landing at the exterior side shall not be more than 1 ½” below the top of the threshold. (See Code for exceptions)
_____ b. Landings at door 1 1/2 “ blow threshold for required egress door . O>K> for 7 ¾” X 3’ landing .

Ceiling
Heights
R-305 and
Room Size
R-304.1

17. _____ a. Every habitable room shall have a ceiling height of 7’ in at least 50% of its required area with no portion of required area less than 5’. All other rooms shall

have a ceiling height of not less than 7' EXCEPTION; Beams spaced not less than 4' o.c. may project not more than 6". EXCEPTION; Ceiling heights in basement without habitable spaces may not be less than 6'-8" clear except for under beams, girders, ducts or other obstructions where the clear height shall be min. 6'-4".

- _____ b. Required areas: one habitable room = 150 sq. ft. min.
other habitable rooms = 70 sq. ft. min. (Not less than 7 feet in any horizontal dimension) kitchen = 50 sq. ft. floor area. min.
- _____ c. Bathrooms minimum height. of 6' 8" 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 percent of floor area must be openable. EXCEPTION: The glazed areas need not be openable where an approved mechanical ventilation system is provided capable of producing a .35 air change per hour. – and the opening is not required by R-310 (Exits). (Submit verification of system design).
- _____ b. Bathrooms (similar to above): 3 sq. ft. glazed, ½ openable. EXCEPTION: Not required if artificial light and mechanical ventilation capable of 50 CFM for intermittent or 20 CFM continuous. 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 and the balance with eave or cornice vents.

Fixture
Clearance
(MD State
806 Plumbing Code

- 19. _____ a. Each water closet shall have min. 15" clear each side of center line and 21" to front.
- _____ b. Clearance at shower stall: 24" x 24" minimum area.
- _____ c. Headroom over fixtures shall be 6 ft. 8 in.
- _____ d. 21 " between front of toilet and tub.

Attic Access
807.1

- 20. _____ A readily accessible access opening not less than 22" x 30" shall be provided to all attic areas with a clear height over 30". 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.
 - wired to nearby 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" 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). Doors into dwelling – solid core wood or 20 minute rated wood or metal, and 4" step up into dwelling.
- _____ b. Under dwelling: walls, partitions, floors and ceilings separating the garage from the adjacent interior spaces shall have not less than 1 hour fire resistance rating. Doors into dwelling shall have a rating of 20 minutes and min. 4" step up into dwelling or basement

Flashing

- 23. _____ Flashing of decks, step flashing of chimneys and dormers and gables – drip caps Over projecting horizontal exterior trim.

Fireblocking 24._____ Fireblocking- 602.8 and under tubs.