

RESIDENTIAL FOUNDATION REQUIREMENTS

1. FOOTINGS

- A. Frost Depth – **bottom** of footing – minimum of **24 inches below grade**.
- B. Minimum size -
 - 1 Story = 6"x12"
 - 2 Story = 6"x15"
 - 3 Story = 6"x23"
- C. Bearing – All footings must be placed on undisturbed soil or compacted soil of 95% modified proctor. Compacted soil must be tested.

2. FOUNDATION STEM WALLS

- A. Minimum thickness – see table below:

Table R404.1.1(1)

Plain Concrete and Plain Masonry Foundation Walls

Maximum Wall Height (feet)	Maximum Unbalanced Backfill Height (feet)	Plain Concrete Minimum Nominal Wall Thickness (inches)	Plain Masonry ^a Minimum Nominal Wall Thickness (inches)
		Soil Classes ^b	
		GM, GC, SM, SM-SC & ML	GM, GC, SM, SM-SC & ML
5	4	6	6 solid ^a or 8
	5	6	8
6	4	6	6 solid ^a or 8
	5	6	8
	6	8 ^g	10
7	4	6	8
	5	6	10
	6	8	12
	7	8	10 solid ^a
8	4	6	6 solid ^a or 8
	5	6	10
	6	8	12
	7	10	12 solid ^a
	8	10	12 solid ^a
9	4	6	6 solid ^a or 8
	5	8 ^g	10
	6	8	12
	7	10	12 solid ^a
	8	10	Footnote e
	9	12	Footnote e

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square inch = 6,895 Pa.

- a. Mortar shall be Type M or S and masonry shall be laid in running bond. UngROUTED hollow masonry units are permitted except where otherwise indicated.
- b. Soil classes are in accordance with the United Soil Classification System. Refer to Table R405.1.
- c. Unbalanced backfill height is the difference in height of the exterior and interior finish ground levels. Where an interior concrete slab is provided, the unbalanced backfill height shall be measured from the exterior finish ground level to the top of the interior concrete slab.
- d. Solid grouted hollow units or solid masonry units.
- e. Wall construction shall be in accordance with Table R404.1.1(2) or a design shall be provided.

- B. Anchor Bolts – ½” Diameter & Extend a minimum of 7” into concrete. J-Bolts spaced a maximum of 6 feet o.c. and less than 12 inches from all breaks in the sill; minimum two (2) per sill plate.

3. GARAGE SLABS

- A. 3 ½” Minimum Thickness

4. CONCRETE

- A. Minimum strength-
Concrete **not exposed** to weather = **2500psi.**
Concrete **exposed** to weather = **3000 psi.**
Porches, exterior slabs, steps and garage floor slabs = **3500 psi.**
- B. All concrete exposed to weather must be 5% to 7% air entrained.

5. GENERAL INFORMATION

- A. Foundation plates must be pressure treated wood
- B. Under-floor clearance must be a minimum of 18” from earth to joist and 12” to girders
- C. Under-floor access must be a minimum of 18”x 24”
- D. Under-floor area must be vented to a minimum of one sq. ft. per 150 sq. ft. of under-floor area and within 3’ of each corner
- E. All rebar must have a minimum 3” coverage from earth and 1 ½” from forms