

# Footings and Foundation Inspection

## Monolithic Slab - (No living space)

❑ Less than 600' must be 16"W x 12" D Edge - 600' to 1040' must be a 16"W x 20"D thickened edge - **Any non-residential slab over 1040 sq feet must be engineered.**

❑ 2 - #4 rebar continuous around the perimeter of foundation - 90 degrees bend on the corners with 24" overlap - no code on the size of the grid on flatwork

**Monolithic Slab on a Residential structure shall be constructed according to Current IRC Chapter 4**

## Poured Concrete-

- ❑ Wall Size: 8 inches    10 inches    12 inches  
Footing:    8" x 16"    10" x 20"    12" x 24"
- ❑ Top of Foundation wall at least 12" above street curb elevation
- ❑ Grade to minimum 6" below the bottom of the siding
- ❑ Grade away from foundation shall fall a minimum 6" within the first 10 ft.
- ❑ Footings located on undisturbed soil minimum 42" frostline
- ❑ All footings 2x the width of the wall
- ❑ Drain tile with gravel or crushed stone
- ❑ Horizontal reinforcing rebar @ top, bottom and middle at 18" on center
- ❑ Horizontal reinforcing #4 rebar within 12" of top and bottom of wall and 18" OC
- ❑ Horizontal rebar    4 ft                            8 ft.                            10ft.  
                                                                  3 rows                            5 rows                            6 rows
- ❑ 2 #4 rebar in footing, continuous, with 24" lap. Minimum 2 ties per lap
- ❑ Horizontal rebar on walls minimum of 2 rows with corners at 90 Degrees
- ❑ Vertical reinforcing for an 8" wall shall be #4 rebar every 4 feet on center
- ❑ Verticals around windows should be within 12 to 15 inches on either side

## Concrete Block

- ❑ Wall size: 8 inches    10 inches    12 inches  
Footing:    8" x 16"    10" x 20"    12" x 24"
- ❑ All footings located on undisturbed soil with 42" minimum frostline
- ❑ All footings 2x the width of the wall
- ❑ 2 #4 rebar in footing, continuous, with 15" lap. minimum 2 ties per lap
- ❑ Corners must be curved and lap minimum of 24"
- ❑ Grade to be minimum of 6" below the bottom of the siding
- ❑ Grade to slope away minimum 6" per foot for 6 to 10 feet
- ❑ Top of foundation wall minimum 12" above street curb elevation
- ❑ Horizontal reinforcing - 1 bond beam with 1 #4 contiguous below windows or at top of the wall
- ❑ Vertical reinforcing:
  - 8" block - 1 #4 bar with a filled core every 4 foot on center
  - 10" block - 1 #4 bar with a filled core every 6 foot on center
  - 12" block - 1 #4 bar with a filled core every 8 feet on center

## Stepped Foundations

1806.3 Stepped Foundations. The code requires that foundations for buildings be essentially level. This means that the bottom bearing surface, as well as the top of the foundation wall which supports the walls must be level. However, a slope of 1 vertical in 10 horizontal is permitted, but when the slope is steeper, the foundation is required to be stepped. The figure below schematically shows a stepped foundation. Although the code places no restriction on a stepped foundation except that the top and bottom surfaces be level, the figure shows a recommended overlap of the top of the foundation wall beyond the step in the founda-

tion to be larger than the vertical step in the foundation wall at that point. This recommendation is based on possible crack propagation at an angle of 45 degrees. In order to keep this effect to a minimum, it is also recommended that the height of each step in the foundation not to exceed 1 or 2 feet (305 or 610mm). Other measures to protect against cracking, such as special reinforcing details, would of course take care of the problem. However, a footing which has no engineering design and which is on competent soil materials most likely will not be reinforced.

