



## Residential Construction Worksheet

See link below for referenced code sections of the 2018 N.C. Residential Code:

<https://codes.iccsafe.org/public/collections/nc>

### FOOTINGS: Conventional light frame construction

<https://codes.iccsafe.org/public/collections/nc> 2018 NC Residential Code, Chapter 4

### CMU and Concrete Walls, Monolithic Slab Footings: Table R403.1

One Story:	Minimum footing width: 12"	Minimum footing thickness: 6"
Two Story:	Minimum footing width: 12"	Minimum footing thickness: 8"
Three Story:	Minimum footing width: 17"	Minimum footing thickness: 10"

#### Footing Dimensions:

Width: 12" minimum  
 Frost Depth: 12" minimum  
 Projections: 2" minimum

#### Footing Reinforcement:

Horizontal diameter \_\_\_\_\_  
 Number of horizontal runs \_\_\_\_\_  
 Hooked dowel bar diameter \_\_\_\_\_  
 Hooked dowel spacing \_\_\_\_\_

#### Foundation Wall:

Thickness \_\_\_\_\_  
 Height \_\_\_\_\_  
 Unbalanced backfill height \_\_\_\_\_

#### Vertical Reinforcement (if applicable):

Size \_\_\_\_\_  
 Spacing \_\_\_\_\_

### Pier and Footing Sizes for Support of Girders: Table R403.1(2)

Area <sup>e</sup>	1 Story			2 Story			2 ½ Story		
	Pier <sup>c,d</sup>	Footing		Pier <sup>c,d</sup>	Footing		Pier <sup>c,d</sup>	Footing	
50	8"x16"	1'-4"x2'-0"	x8"	8"x16"	1'-4"x2'-6"	x8"	8"x16"	1'-4"x2'-6"	x8"
100	8"x16"	1'-4"x2'-0"	x8"	8"x16"	2'-0"x2'-0"	x10"	16"x16"	2'-6"x2'-6"	x10"
150	8"x16"	2'-0"x2'-0"	x8"	16"x16"	2'-8"x2'-8"	x10"	16"x16"	3'-0"x3'-0"	x10"
200	8"x16"	2'-4"x2'-4"	x10"	16"x16"	3'-0"x3'-0"	x10"	16"x16"	4'-0"x4'-0"	x1'-0"
250	--	--		16"x16"	3'-4"x3'-4"	x1'-0"	16"x24"	4'-0"x4'-0"	x1'-0"
300	--	--		16"x16"	3'-8"x3'-8"	x1'-0"	16"x24"	4'-6"x4'-6"	x1'-0"

#### Calculate tributary area:

Definition: Tributary area is the load carried by each pier and footing.

Fill in the following blanks using your plans and apply your answer to the table above.

Engineering may replace this calculation.

Maximum floor joist/truss span: \_\_\_\_\_ x distance between piers or posts: \_\_\_\_\_ = \_\_\_\_\_ sq. ft. of tributary area. Select above the pier and footing sizes for the maximum girder span.

**Floor Framing:**

<https://codes.iccsafe.org/public/collections/nc> 2018 NC Residential Code, Chapter 5

Girders: Size \_\_\_\_\_ Number of Ply's \_\_\_\_\_ Span \_\_\_\_\_

Joists: Size \_\_\_\_\_ Span \_\_\_\_\_ Spacing \_\_\_\_\_

Engineered trusses: Yes \_\_\_\_\_ No \_\_\_\_\_

Floor Sheathing: Size \_\_\_\_\_ Type \_\_\_\_\_

**Note:** Factory truss design shall be on site at framing inspection.

**Wall Framing:**

<https://codes.iccsafe.org/public/collections/nc> 2018 NC Residential Code, Chapter 6

Studs: Size \_\_\_\_\_ Spacing \_\_\_\_\_ Height \_\_\_\_\_

Headers: Size \_\_\_\_\_ Number of Ply's \_\_\_\_\_ Span \_\_\_\_\_

**Note:** Load bearing wall heights exceeding 10' shall meet Chapter 6 requirements.

**Note:** This also applies to gable end walls that exceeds the height requirements.

Walls exceeding height requirements will require a NC Design Professional.

**Roof Framing:**

<https://codes.iccsafe.org/public/collections/nc> 2018 NC Residential Code, Chapter 8

Rafters: Size \_\_\_\_\_ Span \_\_\_\_\_ Spacing \_\_\_\_\_

Engineered Trusses: yes \_\_\_\_\_ no \_\_\_\_\_

**Note:** Factory truss design shall be on site at framing inspection.

**Deck Framing:**

<https://codes.iccsafe.org/public/collections/nc> 2018 NC Residential Code, Appendix M

Footing: Width \_\_\_\_\_ Frost Depth: 12" minimum Spacing \_\_\_\_\_

Girders: Size \_\_\_\_\_ Number of Ply's \_\_\_\_\_ Span \_\_\_\_\_

Joists: Size \_\_\_\_\_ Span \_\_\_\_\_ Spacing \_\_\_\_\_

**Precast Concrete Foundation Walls:**

<https://codes.iccsafe.org/public/collections/nc> 2018 NC Residential Code, Chapter 4, Section 404.5

Yes \_\_\_\_\_ No \_\_\_\_\_

**Note:** Design Professional documentation required.

**Retaining Wall:**

<https://codes.iccsafe.org/public/collections/nc> 2018 NC Residential Code, Chapter 4, Section 404.4

Height \_\_\_\_\_

Unbalanced backfill height \_\_\_\_\_

**Note:** (R404.4) over 4' requires design professional approval prior to certificate of occupancy

\_\_\_\_\_  
Applicant's Signature

\_\_\_\_\_  
Date