

CHAPTER 3 DESIGN CONDITIONS

SECTION 301 GENERAL

301.1 Design criteria. The criteria of this chapter establish the design conditions for use with Chapters 4, 5, 6 and 8.

SECTION 302 THERMAL DESIGN PARAMETERS

302.1 Exterior design conditions. The following design parameters in Table 302.1 shall be used for calculations required under this code.

**TABLE 302.1
EXTERIOR DESIGN CONDITIONS**

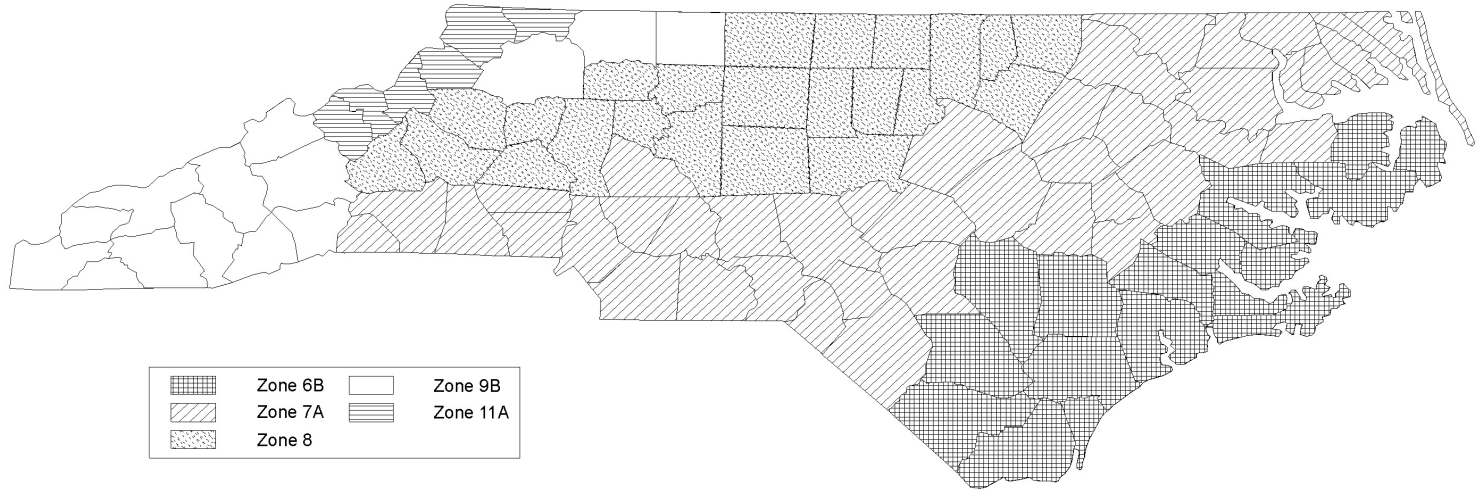
CONDITION	VALUE
Winter ^a , Design Dry-bulb (°F)	
Summer ^a , Design Dry-bulb (°F)	
Summer ^a , Design Wet-bulb (°F)	
Degree days heating ^b	
Degree days cooling ^b	
Climate zone ^c	

For SI: °C = [(°F)-32]/1.8.

- a. The outdoor design temperature shall be selected from the columns of 99 percent values for winter and 1 percent values for summer from tables in the *ASHRAE Fundamentals Handbook*. Adjustments shall be permitted to reflect local climates which differ from the tabulated temperatures, or to reflect local weather experience.
- b. The degree days heating (base 65° F) and cooling (base 65° F) shall be selected from NOAA "Annual Degree Days to Selected Bases Derived from the 1961-1990 Normals," the *ASHRAE Handbook of Fundamentals*, data available from adjacent military installations, or other source of local weather data.
- c. The climate zone shall be selected from the applicable map provided in Figure 302.1(34).



Zone	County	Zone	County	Zone	County	Zone	County	Zone	County	Zone	County	Zone	County
8	Alamance	8	Caldwell	7A	Currituck	7A	Greene	7A	Lee	6B	New Hanover (H)	7A	Richmond
8	Alexander	7A	Camden	6B	Dare (H)	8	Guilford	7A	Lenoir	7A	Northampton	7A	Robeson
11A	Alleghany	6B	Carteret (H)	8	Davidson	7A	Halifax	7A	Lincoln	6B	Onslow (H)	8	Rockingham
7A	Anson	8	Caswell	8	Davie	7A	Harnett	9B	Macon	8	Orange	7A	Rowan
11A	Ashe	8	Catawba	6B	Duplin (H)	9B	Haywood	9B	Madison	6B	Pamlico (H)	7A	Rutherford
11A	Avery	8	Chatham	8	Durham	9B	Henderson	7A	Martin	7A	Pasquotank	6B	Sampson (H)
6B	Beaufort (H)	9B	Cherokee	7A	Edgecombe	7A	Hertford	8	McDowell	6B	Pender (H)	7A	Scotland
7A	Bertie	7A	Chowan	8	Forsyth	7A	Hoke	7A	Mecklenburg	7A	Perquimans	7A	Stanly
6B	Bladen (H)	9B	Clay	8	Franklin	6B	Hyde (H)	11A	Mitchell	8	Person	9B	Stokes
6B	Brunswick (H)	7A	Cleveland	7A	Gaston	8	Iredell	7A	Montgomery	7A	Pitt	9B	Surry
9B	Buncombe	6B	Columbus (H)	7A	Gates	9B	Jackson	7A	Moore	7A	Polk	9B	Swain
8	Burke	6B	Craven (H)	9B	Graham	7A	Johnston	7A	Nash	8	Randolph	9B	Transylvania
7A	Cabarrus	7A	Cumberland	8	Granville	6B	Jones (H)					11A	Yancey



a. Counties identified with (H) shall be considered “hot and humid climate areas” for purposes of the application of Section 502.1.1.1.

FIGURE 302.1(34)
NORTH CAROLINA