



Residential Design Criteria Bulletin # 12

Department of Planning and Land Services, June 2007
Division of Building Safety and Inspection for 2006 I Codes

This bulletin establishes the climatic and geographic design criteria used in designing buildings using the International Residential code.

1. Additional Criteria Established for Climatic and Geographic Design

International Residential Code requires Table R301. 2 (1) to be established.

[B]R301.2 **Climatic and geographic design criteria.** Buildings shall be constructed in accordance with the provisions of this code as limited by the provision of this section. Additional criteria shall be established by the local jurisdiction and set forth in Table R301.2(1).

Table R301.2(1)

Ground Snow Load	Wind Speed ^e (mph)	Seismic Design Category ^g	Subject to Damage From				Winter Design Temp ⁱ	Ice Shield Under-Layment Required	Flood Hazards ^h	Air Freezing Index ^j	Mean Annual Temp ^k
			Weathering ^a	Frost Line Depth ^b	Termite ^c	Decay ^d					
30	85	D1 / D2	Mod	See Map	Slight - Mod	Slight	26	No	PCC 17A.50	50	50

See body of IRC for footnotes.
See item 5 on page 2 of this bulletin.

2. Seismic Design Categories Established

All of Pierce County is Category D1. The area of Pierce County abutting Kitsap County is designated D2 on the IRC map. However, by calculation the increase in seismic acceleration is only 1.5% more than D1.

3. Soil Site Class Established

All of Pierce County will be assumed to be soil Site Class D.

Exception: Sites in a critical area requiring a geotechnical assessment or report shall be required to provide soil Site Class information and a seismic category evaluation.

4. Soil Load-Bearing Values

Assume 1500 psf unless a soils report is provided.

5. Ground Snow Loads Established

IBC 1608.2 Ground Snow-loads. The ground snow-loads to be used in determining the design snow-loads for roofs shall be as shown in the "Snow Load Analysis for Washington" published by the Structural Engineers Association of Washington with a minimum of 30 psf ground snow load.

The residential standard is set at 30lbs for **prescriptive** plan compliance. When using the prescriptive rafter tables in IRC Chapter 8 use the tables with 30lb ground snow load.

When a plan is engineered designers should use the IBC value of 25lbs for ground snow established in PCC 17C.20 170. Design should then follow the provisions in IBC, Section 1608.

6. Declare Prescriptive Path

IRC has three prescriptive paths for building construction. All plan must clearly note which option the plans have been designed to. The options are:

1. International Residential Code, 2006 Edition,
2. Wood Frame Construction Manual (WFCM), and
3. Cold-Formed Steel Framing - Prescriptive Method. (COFS/PM)