

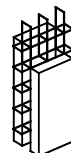
B-3. Group-I. *Low-rise residential buildings*

The table below are taken from *Prescriptive Method for Insulating Concrete Forms in Residential Construction. Second edition. Table 1.1.* (PATH, January 2002) [1].

Applicability limits

Table B-2.1

Attribute	Maximum Limitation
General	
Number of Stories	2 stories above grade plus a basement
Design Wind Speed	150 mph (241km/hr) 3-second gust (130mph (209 km/hr) fastest-mile)
Ground Snow Load	70psf (3.4 kPa)
Seismic Design Category	A, B (Seismic Zone 0, 1, 2)
Foundations	
Unbalanced Backfill Height	9 feet (2.7m)
Equivalent Fluid Density of Soil	60 pcf (960 kg/m ³),
Presumptive Soil Bearing Value	2,000 psf (96 kPa)
Walls	
Unit Weight of Concrete	150 psf (23.6 kN/m ³)
Wall Height	10 feet (3.0 m)
Floors	
Floor Dead load	15 psf (0.72 kPa)
First-Floor Live Load	40 psf (1.9 kPa)
Second-Floor Live Load (sleeping room)	30 psf (1.4 kPa)
Floor Clean Span (unsupported)	32 feet (9.8m)
Roofs	
Maximum Roof Slope	12:12
Roof & Ceiling Dead Load	15 psf (0.72kPa)
Roof Live Load (ground snow load)	70 psf (3.4 kPa)
Attic Live Load	20 psf (0.96 kPa)
Roof Clean Span (unsupported)	40 feet (12m)



- B-3.1. The thickness of the reinforced concrete walls of both underground and above grade walls can be in the range of: 100 to 250mm (from 3.5 " up to 9.5 "). For details, refer to Tables below.
- B-3.2. Interface between the walls and the foundation is provided by means of dowels, which are inserted into the foundation. For projection of the dowels inside the concrete wall see (CAN STANDARD A23.3-94; ACI 318-99, §12.2; §12.5.1). Thus providing continuity of vertical reinforcement.
- B-3.3. Vertical interface of monolithic walls is similar to interface between walls and the foundations. The continuity of vertical reinforcement between panels is achieved by sufficient splice of vertical reinforcement according to the local building code.
- B-3.4. There are three options for using Armopanel system in low-rise residential buildings. The summaries of these three options are presented in tables below.
- 1) **Armopanel™** basement wall supporting one-storey wood framing,
 - 2) **Armopanel™** basement wall supporting two-storey:
 - a) The first storey – concrete floor, and
 - b) The second storey – wood framing.
 - 3) **Armopanel™** basement wall supporting two-storey:
 - a) The first storey – concrete floor,
 - b) The second storey – concrete floor, concrete wall and roof.
- B-3.5. Interface of monolithic reinforced concrete walls with floor and roof is provided by two main types of connections: hinge and fixed.
- B-3.6. Armopanel™ polystyrene boards should be used in the system no earlier than 4 weeks after production.
- B-3.7. Interior surface of the panels should be protected in accordance with NBC of Canada 1995 [9.10.16.(1)], BOCA (NBC1999), ICBO (UBC1997), SBCCI (SBC1999).
- B-3.8. The exterior surface of the panels should be protected with brick veneer, stucco or siding in accordance with NBC of Canada 1995 (9.20, 9.27, 9.28); BOCA (NBC – 1999), SBCCI (SBC –1999).

