

# Product Information Bulletin

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## Advantage ICF System® - Minimum Solid Wall Length

This bulletin provides additional explanation regarding minimum solid wall length per Advantage ICF System® Technical Manual Tables 10a to 10e for wind pressure,  $q(1/50) = 0.4 \text{ kPa}$  to  $1.2 \text{ kPa}$  and Tables 11a to 11e for spectral response acceleration coefficient,  $S_a(0.2) = 0.4$  to  $1.2$ . CCMC Evaluation Report 13101-R equivalent tables are Tables 4.1.2.1.4 a) to e) and 4.1.2.1.5 a) to e).

Minimum solid wall length required for each design requirement refers to total solid wall length for each gable or eave wall of a building with a rectangular floor plan. However, only wall segments with minimum length of 610 mm (24 inches) are included in the total solid wall length.

For the gable wall shown in Figure 1, total solid wall length is equal to  $B1 + B2 + B3$ . For the eave wall shown in Figure 2, total solid wall length is equal to  $L1 + L2 + L3 + L4$ .

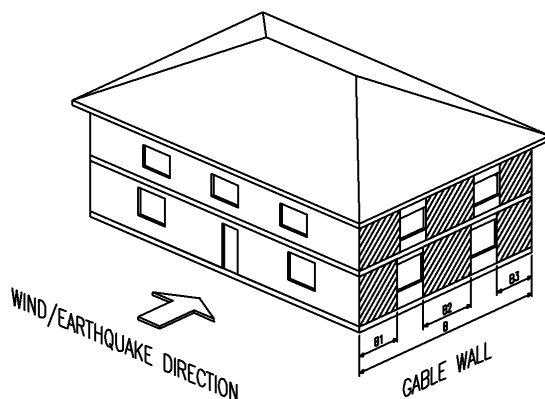


Figure 1 - Gable Wall Length

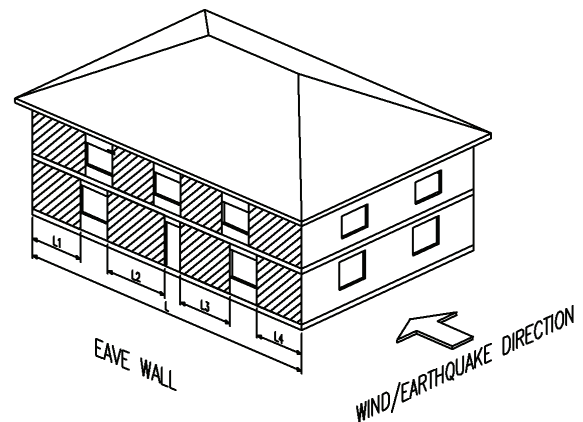


Figure 2 - Eave Wall Length

The following additional requirements from the National Building Code of Canada (NBC) govern minimum solid wall length for above and below grade flat ICF walls:

1. NBC 2005, Sentence 9.20.17.3.(1) states that for above-ground walls “no openings shall occur within 1,200 mm of interior and exterior corners of exterior **non-loadbearing** flat insulating concrete form walls.” The NBC 2010 has added a new Sentence 9.20.17.4.(1) which applies the same provision for above-ground **loadbearing** walls. These provisions mean that the total solid wall length must be at least 2.4 m (8 feet) since each wall has two corner wall segments.
2. Sentence 9.20.17.3.(6) states that for above-ground walls “the cumulative width of openings in **non-loadbearing** flat insulating concrete form walls shall not make up more than 70% of the length of any wall.”
3. NBC 2005 and 2010, Sentence 9.15.4.5.(4) applies the above requirements to below-grade foundation walls by reference to these Articles. In addition, the requirements of Articles 9.15.4.3. and 9.15.4.4. must be complied with for foundation walls with openings to be considered laterally supported.