

## ***Crawl Spaces***

Where no floor system is provided at or near the base of the crawl space foundation wall, the wall shall be placed in a trench. The wall must be backfilled on the inside to resist lateral pressure. This inside backfill must be compacted and be at least  $\frac{2}{5}$  of the exterior backfill height.

## ***First Floors***

Floors at the top of the foundation wall are required to provide resistance to lateral pressures on the foundation walls. Solid sawn wood joists, parallel chord wood floor trusses or I-joists may be used if adequate bracing and blocking is provided.

Framing straps are required in most instances to transfer lateral loads from the walls to the first floor joists.

Stairwell openings adjacent to foundation walls require special framing and increased nailing to provide lateral resistance. The size of the stairwell opening is limited when it is located near an exterior wall.

## ***Support for Veneer***

Masonry veneer exterior cladding may be supported on a PWF on top of the main foundation wall or on a knee wall attached to the exterior of the main foundation wall. CAN/CSA-S406 includes requirements for both these configurations.

**SEE CAN/CSA-S406 FOR  
USEFUL TABLES AND  
DIAGRAMS**

## ***Support for Exterior Steps, Landings and Slabs***

Adequate provisions must be made to account for the effect of additional loading when a driveway or garage slab is adjacent to a PWF. This may be done by selecting the size and spacing of the wall studs to suit, or by supporting the slab on a knee wall.

Exterior steps and landings may be supported on a PWF, but they shall not be hung so as to be cantilevered from the PWF.

## ***Exterior Moisture Barrier***

Except for knee walls or crawl spaces with trenched footings, the below-grade portion of the exterior face of a PWF enclosing habitable space must be protected by a 6 mil polyethylene moisture barrier. It must be applied to the plywood by embedment into vertical beads of sealant or into uniformly applied dampproofing. The moisture barrier must cover the entire surface of the wall below grade including a wood footing, but cannot extend over the granular drainage layer, under a wood footing, or obstruct the drainage passages in a concrete footing.

The moisture barrier must be protected at the upper edge and at corners. At the upper edge, 150 mm of the moisture barrier must be looped over a 12.5 mm thick by 300 mm deep cover plate of treated plywood. The top of the cover plate must extend at least 75 mm above grade at any point, and be embedded in sealant or dampproofing along its entire length.

## ***Backfilling and Site Grading***

**PWFs must not be backfilled until the basement floor and the floor at the top of the foundation walls are fully installed, including subfloor sheathing and all fastenings.**

Backfill must be placed in uniform 600 mm lifts and should not be mechanically compacted. Backfill must be free from deleterious debris, frozen clumps and boulders. Heavy equipment must be kept a safe distance away from the foundation during backfilling.

Native soils with medium or better drainage characteristics may be used as backfill material, except in locations where native soils have a high volume change potential or where soils are susceptible to frost heave. In these locations, backfill and drainage systems must be designed by a qualified engineer. Backfill must be placed so that the final grade away from the house is minimum 1 in 12.

The contents of this brochure are for information purposes only. Designers and builders should refer to *The Uniform Building and Accessibility Standards Regulations* for the purposes of interpretation and application of the law.

### **For more information contact:**

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