




BUILDING STANDARDS ADVISORY

Subject Preserved Wood Foundations	Approved by 	Advisory Number A-13 1 of 2
	Effective Date September 1996	NBC 1995 References(s) 9.15.1.3.

Compliance with *The Uniform Building and Accessibility Standards Act* (the UBAS Act) and regulations is addressed in this advisory. NBC 1995 means the National Building Code of Canada 1995 as adopted by regulations under the UBAS Act. Words in italics, other than Act titles, are defined in the NBC 1995.

Preserved Wood Foundations (PWFs) are also known as Permanent Wood Foundations.

The NBC 1995 requires that PWFs must be designed to conform to Part 4 by a professional *designer* or meet the requirements of the referenced CSA standard, CAN/CSA-S406-92 “Construction of Preserved Wood Foundations,” if all the design assumptions of the standard apply. The standard is based on specific design assumptions regarding installation procedures, soil type, clear spans for floors and roofs, dead and live loads, modification factors, deflections and backfill height. A local authority may consider allowing construction of a PWF not built according to the CSA standard, if it is designed and inspected by a professional *designer* (usually a structural engineer). In addition to the requirement for professional design for PWFs that do not comply with the standard, some local authorities in Saskatchewan require professional design for all *foundations* or require professional designers’ certificates for PWFs.

The CSA standard CAN/CSA-S406-92 “Construction of Preserved Wood Foundations” is available for \$70.00 from:

Canadian Standards Association (CSA)
Standards Sales
5060 Spectrum Way
MISSISSAUGA ON L4W 5N6
Phone 1-800-463-6727 www.csa.ca

[contact information updated Oct/03]

The Canadian Wood Council produced a reference book based on the CSA standard called “Permanent Wood Foundations.” It is available for \$20 from:

The Canadian Wood Council (CWC)
99 Bank Street, Suite 400
OTTAWA ON K1P 6B9
Phone 1-800-463-5091 www.cwc.ca

[contact information updated Oct/03]

Key Points from CAN/CSA-S406-92:

- lumber and plywood, except in limited locations, must be treated with preservative
- treated lumber shall not be cut lengthwise, notched or bored; field cuts must be treated
- nails for fastening treated material must be hot-dipped galvanized or stainless steel
- moisture and vapour barriers must be at least 0.15 mm (6 mil) thickness
- granular material for use in the drainage layer must be clean crushed stone or clean gravel that passes through a 40 mm sieve with not more than 10% of fine material
- the foundation excavation must be free of all organic material and standing water, and must drain toward the sump location



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- a continuous granular drainage layer which drains to the sump is required under all preserved wood footings and floors
- the sump must be provided with drainage outside the building
- perimeter drainage tile (“weeping tile”) cannot be used
- for backfill height greater than 1200 mm, special framing and fastening requirements must be followed for wall openings (windows)
- 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
- concrete floors, wood sleeper floors and suspended wood floors, with polyethylene ground cover for radon control beneath, can all be used as basement floors
- framing straps are usually required to transfer lateral loads from the walls to the first floor joists
- stairwell openings adjacent to foundation walls require special framing
- masonry veneer exterior cladding may be supported on top of the main foundation wall or on a knee wall attached to the exterior of the main foundation wall
- exterior steps and landings may be supported, but they shall not be hung so as to be cantilevered from the PWF
- the moisture barrier (on the outside of the foundation wall where backfill will occur) must be protected at the upper edge and at corners
- backfill must be free from deleterious debris, frozen clumps and boulders
- 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
- heavy equipment must be kept a safe distance away from the foundation during backfilling
- backfill must be placed so that the final grade away from the house is minimum 1 in 12.